SENTIENTPRO

SUPERIOR SECURITY

A21RQ / A23RQ

USER'S MANUAL

V1.0 11.2014

Welcome

Thank you for purchasing our **1080P CCTV kit.**

This user's manual is designed to be a reference tool for the operation of your system.

Do not worry; you do not have to read this entire manual to be up and running. There should be a quick start guide found with your NVR device, which will show you how to setup the connections to the NVR correctly and how to setup a remote monitoring connection.

Here you can find information about the corresponding NVR's features and functions, as well as a detailed menu tree.

Before installation and operation please read the following safeguards and warnings carefully!

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BEFORE YOU BEGIN

Important Safeguards and Warnings

1 . Electrical safety

- All installation and operation should conform to your local electrical safety codes.
- We assume no liability or responsibility for any fires or electrical shock caused by improper handling or installation.

2 . Transportation security

- Heavy stress, violent vibration or water splash should be avoided during transportation, storage and installation.

3 . Installation

- Keep upright. Handle with care.
- Do not apply power to the NVR before completing installation.
- Do not place objects on top of the NVR

4 . Qualified engineers needed

- All examination and repair work should be done by qualified service engineers.
- We are not liable for any problems caused by unauthorised modifications or attempted repair.

5 . Environment

- The NVR should be installed in a cool, dry place away from direct sunlight and inflammable or explosive substances, etc.
- This product should be transported, stored and operated in an environment ranging from 0℃ to 55 ℃.
- Do not place heavy objects on top of the NVR.
- Avoid locations that are subjected to heavy vibrations, e.g. next to a washing machine.

6. Accessories

- Be sure to use all the accessories available in the Sentient range.
- Before installation, please open the package and check all the components are included.
- Contact your local Maplin outlet if something is broken or missing in your package.

7. Lithium battery

- Improper battery use may result in fire, explosion, or personal injury.
- When replacing the battery, please make sure you use the same model. (CR2032 Motherboard battery).

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1 Features & Quick Setup

1.1 Overview

The NVR delivers high performance within a networked security surveillance system. This series of products supports live view, multiple-window display, recorded file local storage, remote control & mouse shortcut menu operation, and remote management & control function. One of the main features of this CCTV kit is the single wire connection between the camera and the NVR. There is no need for an additional power cable to the camera because the power is supplied by the NVR via the single Ethernet cable. The kit can also record in full 1080p HD resolution so you can monitor your property/possessions in high detail.

This 1080P kit can be widely used in many areas such as public security, water conservancy, transportation and education.

1.2 Features

Storage	• Via corresponding setup (such as alarm setup and schedule setup), you can backup related audio/video data on to the network video recorder. • Supports Web and local video recording.
Alarm	• Responds to external alarms (within 200miliseconds) whilst continuing to monitor and record video camera footage. This is based on user's pre-defined relay setup, the system can process the alarm input systematically and will prompt user by using screen and voice alerts (supports pre-recorded audio). • Supports central alarm server setup, so that alarm information can remotely notify the user automatically. • Alarm trigger Alerts sent to your EMAIL.
Network Monitor	• Sending audio/video data, through the network, can both be compressed by the IPC or the NVS and then sent to the monitoring station. The data will then be decompressed and displayed. If the bandwidth is big enough, latency will be less than 500miliseconds. • Supports a maximum of 10 connections • Transmit audio/video data by HTTP, TCP, UDP, MULTICAST, RTP/RTCP, etc. • Transmit some alarm data or alarm info by SMTP. • Supports access in WAN.
Window Split	• Adopt the video compression and digital process to display multiple windows on one monitor. Supports 1/4/8/16-window display.
Record	• Supports scheduled record function. Save the recorded files on to the HDD, client-end PC, or network storage server. You can search or playback the saved files at the local-end or via the Web.

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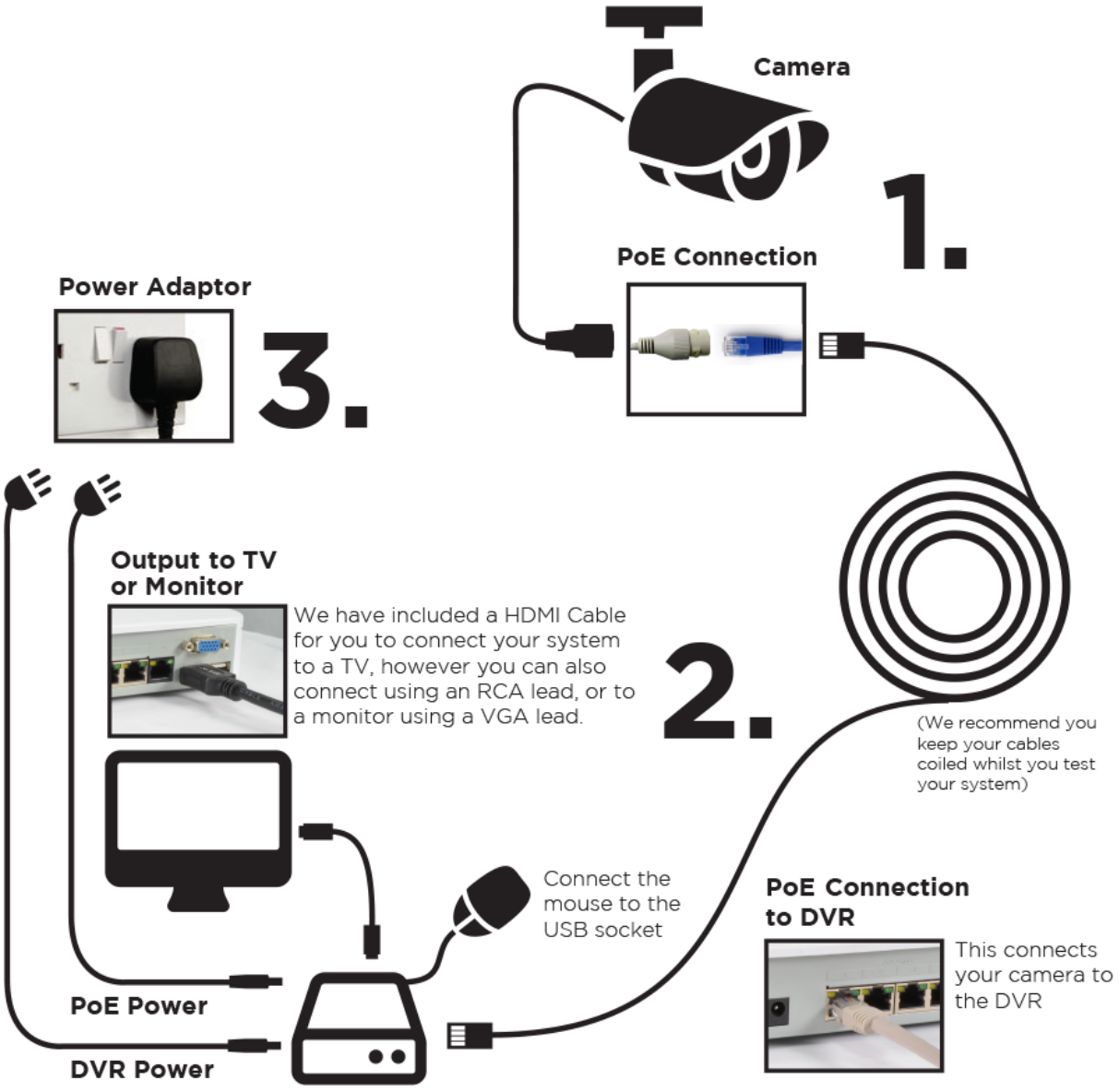
Backup	• Supports network backup, USB2.0 record backup function, the recorded files can be saved on to a network storage server, peripheral USB2.0 device, burner, etc.
Network Management	• Supervise NVR configuration and control power via an Ethernet connection. • Supports network management remotely via the internet.
Peripheral Equipment Management	• Supports peripheral equipment management such as protocol setup and port connection. • Supports transparent data transmission such as RS232 (RS-422), RS485 (RS-485).
Auxiliary	• Supports both NTSC and PAL video formats. • User can access real-time system resource information and running statistics display. • Supports log files. • Local GUI output. Shortcut menu operation via mouse. • IR control function. Shortcut menu operation via remote control. • Support IPC or NVS remote video preview and control.

1.3 Quick Setup Diagram


Camera
1.
PoE Connection
Power Adaptor
3.
Output to TV or Monitor
We have included a HDMI Cable for you to connect your system to a TV, however you can also connect using an RCA lead, or to a monitor using a VGA lead.
2.
(We recommend you keep your cables coiled whilst you test your system)
Connect the mouse to the USB socket
PoE Connection to DVR
This connects your camera to the DVR
PoE Power
DVR Power

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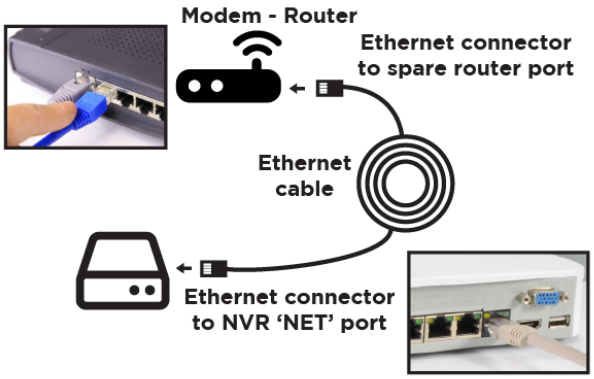
1.4 Smart Phone Setup for Live View & Remote Playback

For the convenience of monitoring your Sentient security system on the move via your smart phone we have provided a quick and simple remote connection setup service. Please follow the steps below closely to successfully setup the connection for live view and remote playback.

1. Internet connection
Connect the Ethernet cable into the 'Net' port on the rear of the device, then connect the other end into one of the spare ports on your modem-router, as shown below.



2. Enable P2P on your DVR
Turn the power on to the DVR device. When it has fully booted up, from the main menu select 'Setup', then 'Network' and finally 'P2P'. See image below:

Click the 'Enable' box to enable the P2P connection on the device.

Click 'OK' to save.

3. Download and install Sentient Pro app to your smart phone
To be taken to the app download link please scan the QR code below that corresponds to the type of smartphone device that you use:

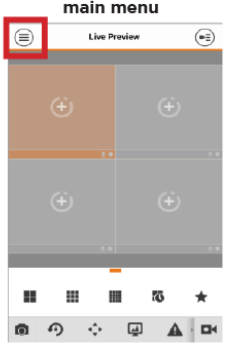
ANDROID APP

iOS (APPLE) APP

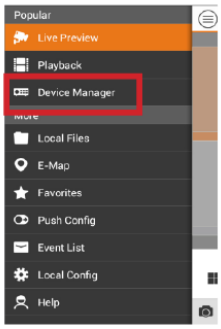
SENTIENT PRO

4. Operating Sentient Pro smartphone app
When you have completed intallation of the app to your smartphone, open the app.

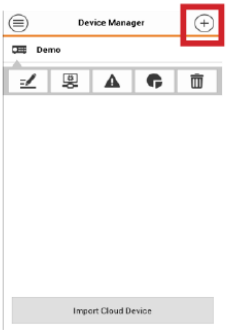
4a. Select drop down main menu



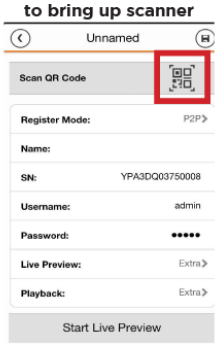
4b. Select 'Device Manager'



4c. Add new device

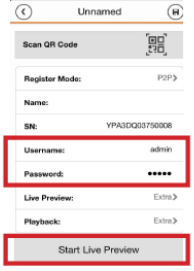


4d. Select QR code icon to bring up scanner



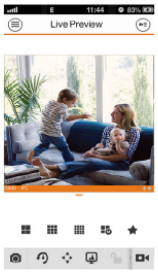
4e. Scan QR code shown in the P2P section of the Network menu (you can scan the QR code shown on the monitor screen).

4f. Please input:
Username: admin
Password: 888888
Then select 'Start Live Preview'



It is very important you change the password on your device to ensure optimum security.

4g. You will now be able to view the live camera feeds from your NVR



Success! You should now be fully setup.

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1.5 Specifications

Parameter	Specifications	
System Resources	Max support 16-ch standard definition with the transmission rate of 2Mbps for each channel; 8-channel 720P, with the transmission rate of 4Mbps for each channel; 4-channel 1080P, with the transmission rate of 8Mbps for each channel; Support 20 online users at the same time, The image delay time of each channel is under 500ms.	
Operation System	Embedded Linux real-time operation system	
Operation Interface	WEB/Local GUI	
Video Compression	H.264/MPEG4	
Encode Capacity	For H.264, it max supports 16-channel D1, 8-channel 720P, 4-channel 1080P.	
Audio Compression	G.711a	
Video Output	1-channel VGA analog video output.	
Video Input	4/8/16-ch network compression video input	
HDMI	1-ch HDMI output.	
Audio Input	1-ch bidirectional audio input	
Window Split	1/4/9-window	
Multiple-channel Playback	Max 16-channel D1/8-channel 720P/4-channel 1080P playback.	
Storage	One built-in SATA port.	
USB2.0 Port	One peripheral USB2.0 port.	
Network Connection	One RJ45 10/100Mbps self-adaptive Ethernet port.	
Power Port	One power port, power adapter. Input DC 12V.	Two power ports, power adapter. Input DC 12V or DC 48V.
Power Button	No on/off button. Connect to the power cable to boot up.	

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IR Remote Control Receiver	Support IR remote control
Clock	Built-in clock.
Indication Light	One power status indication light. One network status indication light. One HDD status indication light.
Power Consumption	＜12W(Excluding HDD)
Working Temperature	0℃～+50℃
Working Humidity	10%－90%
Air pressure	86kpa－106kpa
Dimension	270mmX205mmX41mm
Weight	600-700G（Exclude HDD）
Installation	Desk installation

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2 Front Panel and Rear Panel

2.1 Front Panel

The front panel is shown as in Figure 2-1.

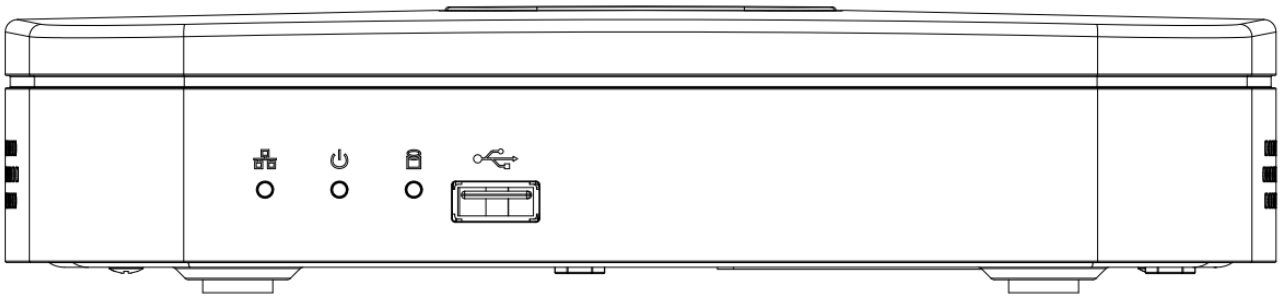

Figure 2-1

Please refer to the following sheet for detailed information:

Icon	Name	Function
	Power indicator light	The blue light becomes on when the power connection is OK.
	Network status indicator light	The blue light becomes on when the network connection is abnormal or offline.
	HDD status indictor light	The red light becomes on when HDD is abnormal or HDD space is below the threshold.
	USB	USB port. Connect to USB storage device, mouse burner and etc.

2.2 Rear Panel

The rear panel is shown as below. See Figure 2-.

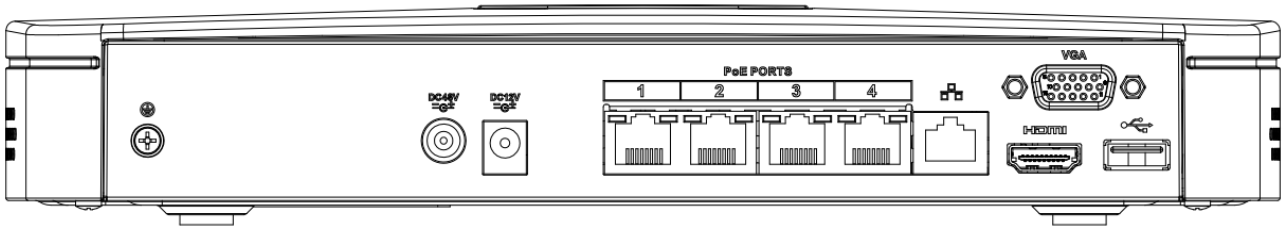

Figure 2-2

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Please refer to the following sheet for detailed information:

Port Name		Connection	Function
	Network port	/	10M/100/1000Mbps self-adaptive Ethernet port. Connect to the network cable.
HDMI	High Definition Media Interface	/	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device.
VGA	VGA video output port	VGA	VGA video output port. Output analog video signal. It can connect to the monitor to view analog video.
	GND	/	Alarm input port GND port.
	Power input port	/	Power port. Input 12V DC.
	Power input port	/	Switch power port. Input DC 48V.
PoE PORTS	4 PoE ports	/	Built-in Switch supports PoE function. The 4 PoE ports series product supports total 48V 50W.
	USB 2.0 port	/	USB 2.0 port. Conenct to mouse.
Wireless AP			Support wireless hotspot function. Use WIFI to connect to the network camera when there is a hotspot.

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2.3 Mouse Operation

Please refer to the following sheet for mouse operation instruction:

<table>
<tr><td rowspan="5">Left click mouse</td><td>When you have selected one menu item, left click mouse to view menu content.</td></tr>
<tr><td>Modify checkbox or motion detection status.</td></tr>
<tr><td>Click the ‘Combo’ box to pop up dropdown list</td></tr>
<tr><td>In the input box, you can select input methods. Left click the corresponding button on the panel you can input numeral/English character (small/capitalised). Here the ← stands for backspace button. __ stands for space button.

In English input mode: _ stands for input a backspace icon and ← stands for deleting the previous character.

In numeral input mode: _ stands for clear and ← stands for deleting the previous numeral.</td></tr>
<tr><td rowspan="2">Double left click mouse</td><td>Implement special control operation such as double click one item in the file list to playback the video.</td></tr>
<tr><td>In multiple-window mode, double left click one channel to view in full-window. Double left click current video again to go back to previous multiple-window mode.</td></tr>
<tr><td rowspan="2">Right click mouse</td><td>In real-time monitor mode, this action pops up shortcut menu.</td></tr>
<tr><td>Exit current menu without saving the modification.</td></tr>
<tr><td rowspan="3">Press middle button</td><td>In numeral input box: Increase or decrease numeral value.</td></tr>
<tr><td>Switch the items in the check box.</td></tr>
<tr><td>Page up or page down</td></tr>
<tr><td>Move mouse</td><td>Select current control or move control</td></tr>
<tr><td rowspan="2">Drag mouse</td><td>Select motion detection zone</td></tr>
<tr><td>Select privacy mask zone.</td></tr>
</table>

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3 GUI (Graphic User Interface) Operation

3.1 Boot up and Shutdown

3.1.1 Boot up

Before the boot up, please make sure:

- The rated input voltage matches the device's power on-off button. Please make sure the power wire connection is securely in place. Then switch on the power on-off button.
- Always use the stable current, if necessary an Uninterruptible Power Supply is one of the best alternative measures to protect device from unstable electrical environments, which are prone to spikes or dropouts.
  Please follow the steps listed below to boot up the device.
- Connect the device to the monitor and then connect a mouse.
- Connect power cable.
- Press the power button at the front or rear panel and then boot up the device. After device booted up, the system is in multiple-channel display mode by default.

3.1.2 Shutdown

Notes:

- When you see the corresponding dialogue box "**System is shutting down…**" Do not click power on-off button whilst shutdown is in process.
- Do not unplug the power cable or click power on-off button to shutdown device directly when device is running (especially when this is recording).

There are three ways for you to log out.

1. Main menu (**RECOMMENDED**). From Main Menu->Shutdown, select shutdown from dropdown list. Click OK button, you will see that the device shuts down.

2. From power on-off button on the front panel. Press the power on-off button on the NVR front panel or remote control for more than 3 seconds to shut down the device.

3. From power on-off button on the rear panel.

3.2 Startup Wizard

After the device has successfully booted up, it will proceed to startup wizard.

Click Cancel/Next button, you can see that the system goes to login interface.

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Tips

- Tick the **'Startup'** box button here, system goes to startup wizard again when it boots up the next time.
- Cancel the Startup button, system goes to the login interface directly when it boots up the next time round.

Figure 3-1

Click the Cancel button or Next Step button, system goes to login interface. See Figure 3-2. System consists of four accounts:

- **Username**: admin. **Password**: admin. (administrator, local and network)
- **Username**: 888888. **Password**: 888888. (administrator, local only)
- **Username**: 666666. **Password**: 666666 (Lower authority user who can only monitor, playback, backup, etc)
- **Username**: default. **Password**: default (hidden user). Hidden user "default" is for system interior use only and cannot be deleted. When there is no login user, hidden user "default" automatically login. You can set the some rights such as monitor for this user so that you can view some channel view without login.

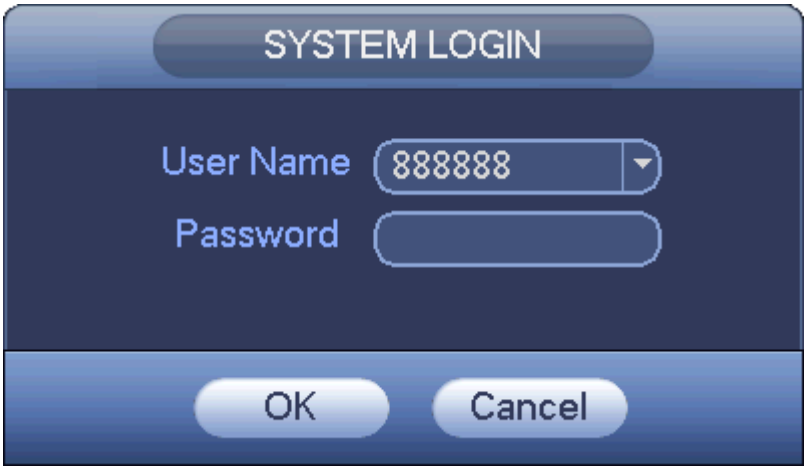

Figure 3-2

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Note:
For security reason, please modify password after your first login.

The result of you having three login failures within a 30 minute time frame will trigger the system alarm and after five login failures the account will be locked!

Click OK button, you can go to General interface. See Figure 3-3.

Figure 3-3

Click Next button, you can go to network interface. See Figure 3-4

Figure 3-4

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Click Next button, you can go to remote device interface. See Figure 3-5.

Figure 3-5

Click Next button, you can go to Schedule interface. See Figure 3-6.

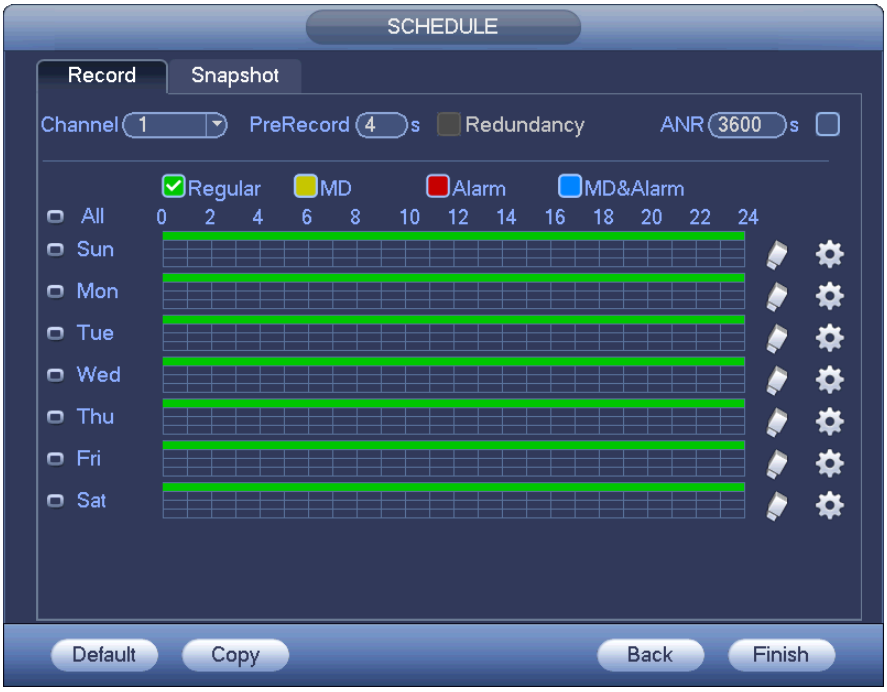

Figure 3-6

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Click the Finish button, the system will then pop up a dialogue box. Click the OK button, the startup wizard will then be complete. See Figure 3-7.

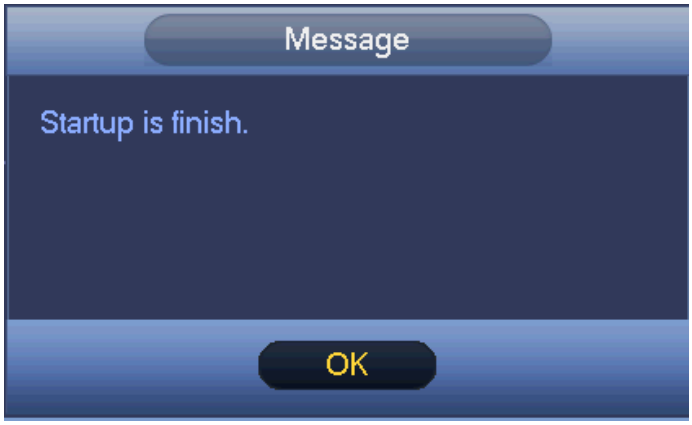

Figure 3-7

3.3 Navigation Bar

You need to go to the **Main menu->Setting->System->General** to enable navigation bar function; otherwise you cannot see the following interface.

The navigation bar is shown below. See Figure 3-8.

Figure 3-8

3.3.1 Main Menu

Click button to go to the main menu interface.

3.3.2 Output Screen

Select corresponding window-split mode and output channels.

3.3.3 Tour

Click button to enable tour, the icon becomes , you can see the tour is in process.

3.3.4 PTZ

Click , the system goes to the PTZ control interface. Please refer to chapter 3.6.2.

3.3.5 Color

Click button , the system goes to the color interface. Please refer to chapter 3.5.4.1.

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Please make sure system is in one-channel mode.

3.3.6 Search

Click button , the system goes to the search interface. Please refer to chapter 3.8.2

3.3.7 Alarm Status

Click button , system goes to alarm status interface. This is to view device status and channel status. Please refer to chapter 3.14.1.4.

3.3.8 Channel Info

Click button , the system goes to the channel information setup interface. This is to view information of the corresponding channel. See Figure 3-9.

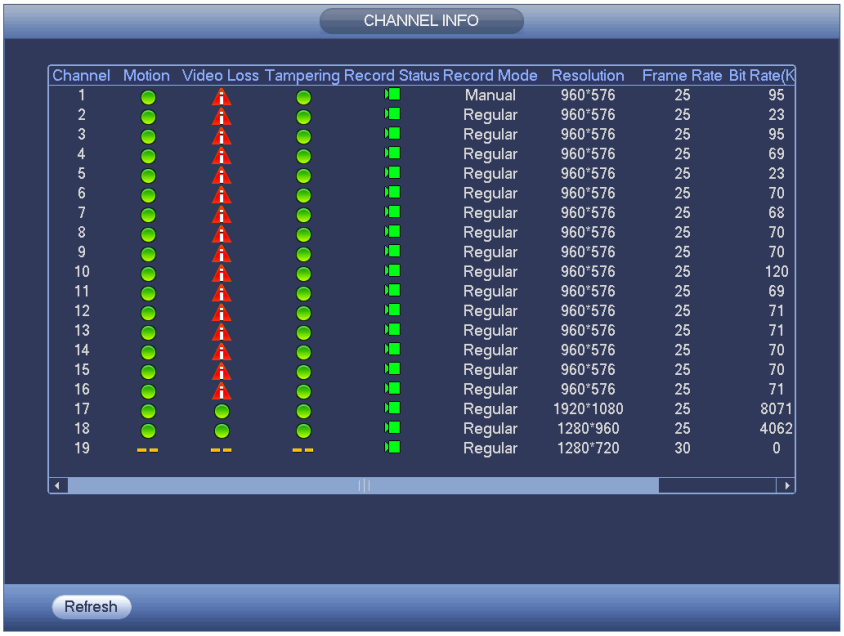
CHANNEL INFO
Channel Motion Video Loss Tampering Record Status Record Mode Resolution Frame Rate Bit Rate(K
1 Manual 960*576 25 95
2 Regular 960*576 25 23
3 Regular 960*576 25 95
4 Regular 960*576 25 69
5 Regular 960*576 25 23
6 Regular 960*576 25 70
7 Regular 960*576 25 68
8 Regular 960*576 25 70
9 Regular 960*576 25 70
10 Regular 960*576 25 120
11 Regular 960*576 25 69
12 Regular 960*576 25 71
13 Regular 960*576 25 71
14 Regular 960*576 25 70
15 Regular 960*576 25 70
16 Regular 960*576 25 71
17 Regular 1920*1080 25 8071
18 Regular 1280*960 25 4062
19 Regular 1280*720 30 0
Refresh

Figure 3-9

3.3.9 Remote Device

Click , system goes to the remote device interface. Please refer to chapter 3.4

3.3.10 Network

Click , system goes to the network interface. This is to set network IP address, default gateway , etc.. Please refer to chapter 3.11.

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3.3.11 HDD Manager

Click , the system goes to the HDD manager interface. This is to view and manage HDD information. Please refer to chapter 3.12.1.

3.3.12 USB Manager

Click , the system goes to the USB Manager interface. This is to view the USB information, backup and update. Please refer to chapter 3.9.1 file backup, chapter 3.9.3 backup log, chapter 3.9.2 import/export, and chapter 3.14.4 upgrade for detailed information.

3.4 Remote Device

3.4.1 Remote Device Connection

From **Main menu->Setting->Remote device** or right click mouse on the preview interface and then select remote device item, you can see the following interface. See Figure 3-10.

Figure 3-10

Click Device search button, you can view the searched IP addresses at the top pane of the interface.

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Double click an IP address or check one IP address and then click Add button, you can add current device to the bottom pane of the interface. System supports batch add function.

Click Manual Add button, you can add a device directly. Here you can set the TCP/UPD/auto connection mode. The default setup is TCP. See Figure 3-11.

IMPORTANT!
Please note the manual add function is for, Panasonic, Sony, Dynacolor, Samsung, AXIS, Arecont, ONVIF and Custom. When the type is the custom, you can just input URL address, user name and password connect to the network camera without considering network camera manufacture. Please contact your network camera manufacturer for the URL address.

Figure 3-11

3.4.2 Short-Cut Menu

In the preview interface, for the channel with no IPC connection, you can click the icon **“+”** in the centre of the interface to quickly go to the Remote Device interface. See Figure 3-12.

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Figure 3-12

3.4.3 Image

From **main menu->setting->camera->image**, you can see the image interface is shown below. See Figure 3-13.

- **Channel:** Select a channel from the dropdown list.
- **Saturation:** This is to adjust the monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not look great if the value is too low. The recommended value ranges from 40 to 60.
- **Brightness:** This is to adjust monitor window bright. The value ranges from 0 to 100. The default value is 50. The larger the number is, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
- **Contrast:** This is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number is, the higher the contrast is. You can use this function when the whole video's brightness is OK but the contrast is not correct. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure .The recommended value ranges from 40 to 60.
- **Auto Iris:** This is for the device of the auto lens. You can check the box before ON to enable this function. The auto iris may change if the light becomes different. When you disable this function, the iris is at the max. System does not add the auto iris function in the exposure control. This function is on by default.
- **Mirror:** This is to switch to the video's up and bottom limit. This function is disabled by default.
- **Flip:** This is to switch the to video's left and right limit. This function is disabled by default.
- **BLC:** It includes several options: **BLC/WDR/HLC/OFF**.
  - ✧ **BLC:** The device auto exposures according to the environments situation so that the darkest area of the video is cleared

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- ✧ **WDR:** For the WDR scene, this function can lower the high bright section and enhance the brightness of the low bright section. So that you can view these two sections clearly at the same time. The value ranges from 1 to 100. When you switch the camera from no-WDR mode to the WDR mode, system may lose several seconds of recorded video.
- ✧ **HLC:** After you enabled HLC function, the device can lower the brightness of the brightest section according to the HLC control level. It can reduce the area of the halo and lower the brightness of the whole video.
- ✧ **OFF:** This is to disable the BLC function. Please note this function is disabled by default.

- **Profile:** This is to set the white balance mode. It has an effect on the general hue of the video. This function is on by default. You can select the different scene mode such as auto, sunny, cloudy, home, office, night and disable. These are to adjust the video to the best quality.
  - ✧ **Auto:** The auto white balance is on. System can auto compensate the color temperature to make sure the color level is correct.
  - ✧ **Sunny:** The threshold of the white balance is in the sunny mode.
  - ✧ **Night:** The threshold of the white balance is in the night mode.
  - ✧ **Customised:** You can set the the gain of the red/blue channel. The value reneges from 0 to 100.
- **Day/night**: This is to set device color and the B/W mode switch. The default setup is auto.
  - ✧ **Color:** Device outputs the color video.
  - ✧ **Auto:** Device auto select to output the color or the B/W video according to the device feature (The general bright of the video or there is IR light or not.)
  - ✧ **B/W:** The device outputs the black and white video.
  - ✧ **Sensor:** This is to set when there is peripheral connected IR light.

Figure 3-13

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3.4.4 Channel Name

From main menu->Setting->Camera-Channel name, you can see an interface shown in Figure 3-14.

This is to modify channel name. It supports a maximum of 31-characters.

Please note you can only modify the channel name of the connected network camera.

Figure 3-14

3.4.5 Upgrade

This is to update the network camera.

From **main menu->setting->camera->remote**, the interface is shown below. See Figure 3-15. Click Browse button and then select the upgrade file. Then select a channel (or you can select device type filter to select several devices at the same time.)

Click Begin button to upgrade. You can see the corresponding dialogue once the upgrade is finish.

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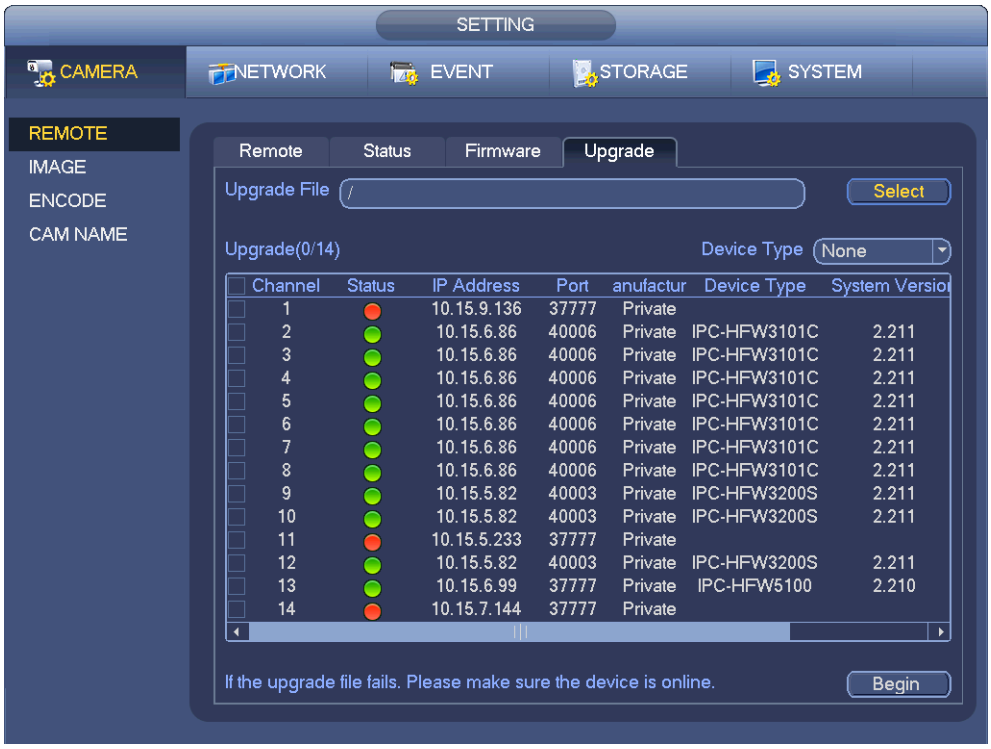

Figure 3-15

3.4.6 UPNP

Important

Do not connect the switch to the PoE port, otherwise the connection may fail!

Please connect the IPC to the PoE port of the device rear panel (

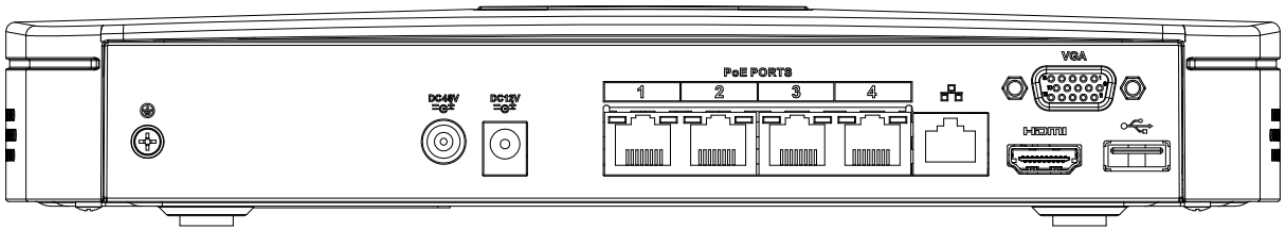

Figure 3-16), system can auto connect to the network camera. Please note the following figure is for reference only.

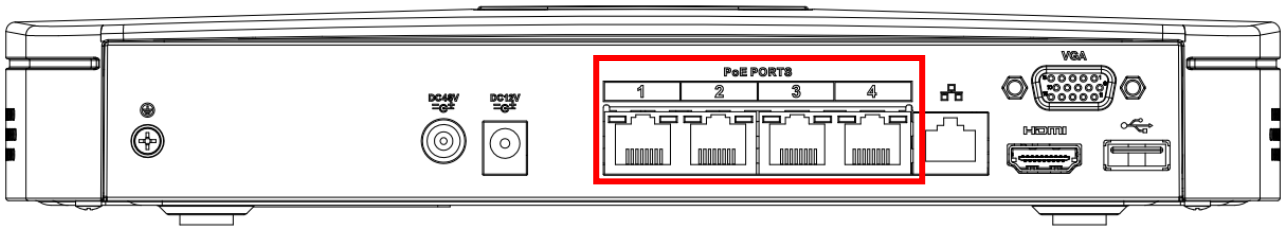

Figure 3-16

3.4.7 Built-in Switch Setup

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From **Main menu->Setting->Network->Switch**, you can set the switch IP address, subnet mask, gateway , etc.. See Figure 3-17.

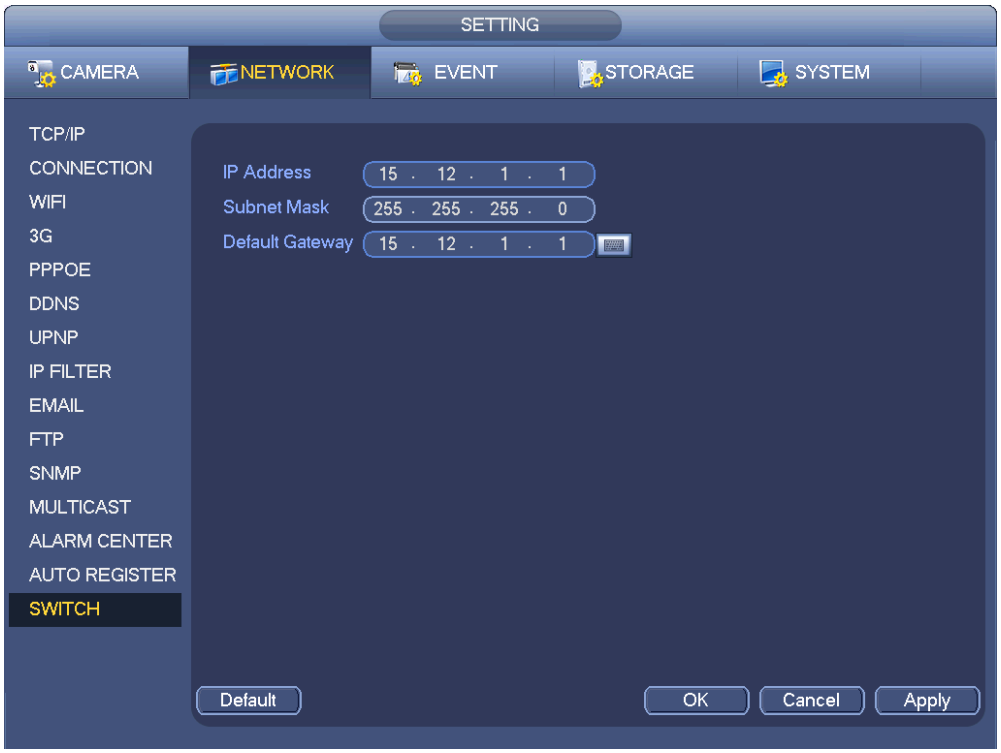

Figure 3-17

3.5 Preview

After device booted up, the system is in multiple-channel display mode. See Figure 3-18.

Figure 3-18

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3.5.1 Preview

If you want to change system date and time, you can refer to general settings (**Main Menu->Setting->System->General**). If you want to modify the channel name, please refer to the display settings (**Main Menu->Camera->CAM name**).

Please refer to the following sheet for detailed information:

1		Recording status	**3**		Video loss
2		Motion detection	**4**		Camera lock

Tips:

- Preview drag: If you want to change position of channel 1 and channel 2 when you are previewing, you can left click mouse in the channel 1 and then drag to channel 2, release mouse you can switch channel 1 and channel 2 positions.
- Use mouse middle button to control window split: You can use mouse middle button to switch window split amount.

3.5.2 Preview control interface

Move you mouse to the top centre of the video of current channel, you can see system pops up the preview control interface. See Figure 3-19. If your mouse stays in this area for more than 6 seconds and has no operation, the control bar automatically hides.

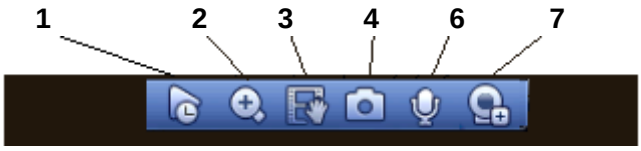

Figure 3-19 Digital Channel

1) Realtime playback

This is to playback the previous 5-60 minutes record of current channel.

Please go to the **Main menu->Setting->->System->General** to set real-time playback time. System may pop up a dialogue box if there is no such record in current channel.

2) Digital zoom

This is to zoom in specified zone of current channel. It supports zoom in function of multiple-channel.

Click button, the button is shown.

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There are two ways for you to zoom in:

1. Drag the mouse to create and select a zone, you can view the interface shown in Figure 3-20.

Figure 3-20

2. Put the middle button at the centre of the zone you want to zoom in, and move the mouse, you can view an interface shown in Figure 3-21.

Figure 3-21

Right click mouse to cancel zoom and go back to the original interface.

3) Manual record function

This is to back up the video of current channel to the USB device. System cannot backup the video coming from multiple-channels at the same time.

Click button , the system will begin recording. Click it again, system stops recoridng. You can find the record file on the flash disk.

4) Manual Snapshot

Click to snapshot 1-5 times. The snapshot file is saved on the USB device or HDD. You can go to the Search interface (chapter 3.8) to view.

5) Bidirectional talk

If the connected front-end device supports bidirectional talk function, you can click this button.

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Click button to start bidirectional talk function the icon now is shown . Now the rest of the bidirectional talk buttons of digital channel becomes null too.

Click again, you can cancel bidirectional talk and the bidirectional talk buttons of other digital channels become as .

6) Remote device

Click it to go to the remote device interface to add/delete remote device or view its corresponding information. Please refer to chapter 3.4.2 for detailed information.

3.5.3 Right Click Menu

After you logged in the device, right click mouse, you can see the short cut menu. Please see Figure 3-22.

- Window split mode: You can select window amount and then select channels.
- PTZ: Click it to go to PTZ interface.
- Auto focus: This is to set auto focus function. Please make sure the connected network camera supports this function.
- Color setting: Set video corresponding information.
- Search: Click it to go to Search interface to search and playback a record file.
- Record control: Enable/disable record channel.
- Alarm output: This is to set alarm output mode.
- Remote device: Search and add a remote device.
- Alarm output: Generate alarm output signal manually.
- Main menu: Go to system main menu interface.

Tip: Right click mouse to go back to the previous interface.

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Figure 3-22

3.5.4 Preview Display Effect Setup

3.5.4.1 Video Color

Here you can set the hue, brightness, contrast, saturation, gain, white level, color mode , etc.. See Figure 3-23.

Figure 3-23

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Please refer to the following sheet for detailed information:

Item	Note
Period	There are two periods in one day. You can set the different sharpness, brightness, and contrast setup for different periods.
Effective Time	Check the box here to enable this function and then set period time.
Sharpness	The value here is to adjust the edge of the video. The value ranges from 0 to 100. The larger the value is, the clear the edge is and vice versa. Please note there is noise if the value here is too high. The default value is 50 and the recommended value ranges from 40 to 60.
Brightness	This is to adjust monitor window bright. The value ranges from 0 to 100. The default value is 50. The larger the number, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
Contrast	This is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure .The recommended value ranges from 40 to 60.
Saturation	This is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be at the best quality if the value is too low. The recommended value ranges from 40 to 60.
Gain	The gain adjust is to set the gain value. The default value may vary due to different device models. The smaller the value, the lower the noise. But the brightness can also be too low in the dark environments. It can enhance the video brightness if the value is high. But the video noise may become too clear.
Color mode	It includes several modes such as standard, color, bright, gentle. Select a color mode, the sharpness, brightness, contrast, etc.. This can automatically switch to corresponding setup.

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3.5.4.2 Display

From **Main Menu->Setting->System->Display**, you can go to the following interface. See Figure 3-24.

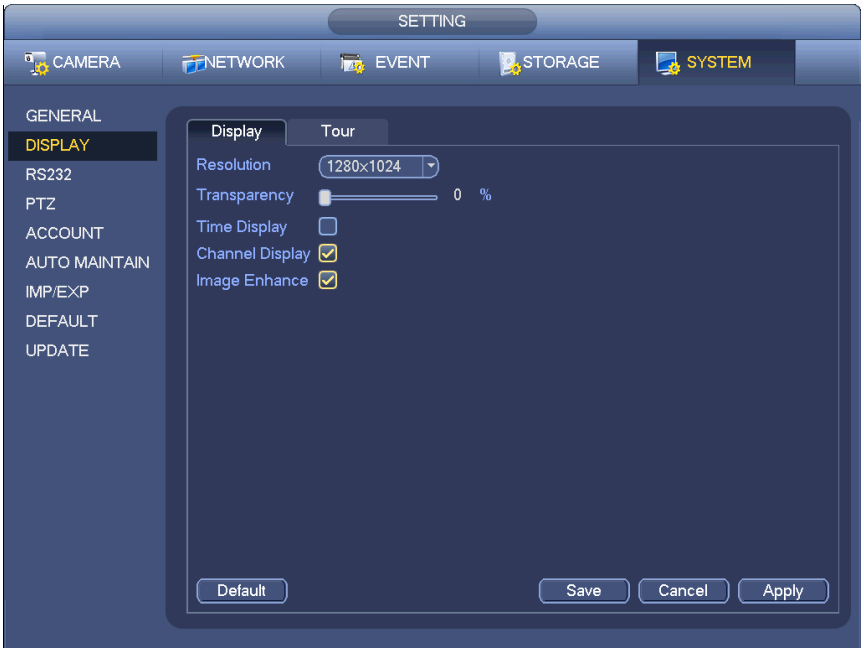

Figure 3-24

Now you can set the corresponding information.

- **Transparency**: This is for you to adjust transparency. The value ranges from 128 to 255.
- **Channel name**: This is for you to modify channel name. System max support 25-digit (The value may vary due to different series). Please note all your modification here only applies to NVR local end. You need to open web or client end to refresh channel name.
- **Time display**: You can select to display time or not when system is playback.
- **Channel display**: You can select to channel name or not when system is playback.
- **Resolution**: There are four options: 1280×1024 (Default), 1280×720, 1920×1080, 1024×768. Please note the system needs to reboot to activate current setup.
- **Image enhance**: Check the box; you can optimise the margin of the preview video.

Click OK button to save current setup.

Note

The display parameter here has no effect on the record file and playback effect.

3.5.5 Preview Parameter

Set preview display mode, channel display sequence and tour setup.

- Set preview display mode: On the preview interface, right click mouse, you can view right-click menu. Now you can select preview window amount and channel.
- Set channel display mode: On the preview interface, if you want to change channel 1 and

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channel 16 position, please right click channel 1 video window and then drag to the channel 16 video window, release button, you can change channel 1 and channel 16 position.

- Tour setup: Here you can set the preview window channel display mode and interval. Please follow the steps listed below.

From **Main menu->Setting->System->Display**, you can see an interface shown in Figure 3-25. Here you can set the tour parameter.

- **Enable tour:** Check the box here to enable tour function.
- **Interval:** Input proper interval value here. The value ranges from 1-120 seconds.
- **Monitor tour type**: System support 1/8-window tour.
- **Alarm tour type**: System support 1/8-window tour.

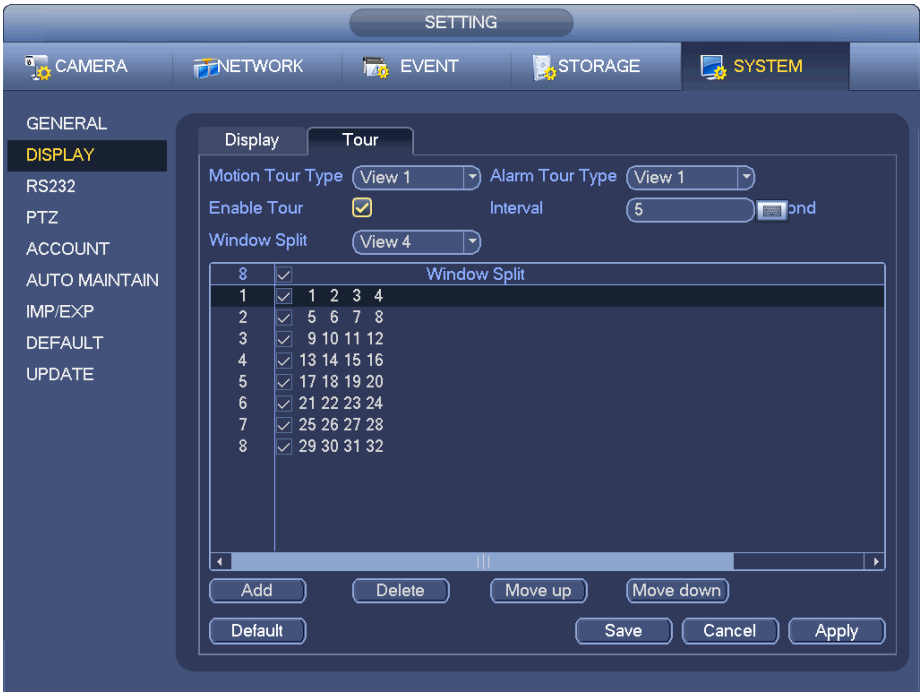

Figure 3-25

Tips

On the navigation bar, click / to enable/disable tour. Click Save button to save current setup.

3.6 PTZ

Note:

Before you control the PTZ, please make sure the PTZ decoder and the NVR network connection is OK and the corresponding settings are right.

3.6.1 PTZ Settings

Cable Connection

Please follow the procedures below to go on cable connection:

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- Connect the dome RS485 port to NVR RS485 port.
- Connect dome video output cable to NVR video input port.
- Connect power adapter to the dome.

In the main menu, from **Setting->System->PTZ**, you can see an interface is shown in Figure 3-26. Here you can set the the following items:

- **Channel**: Select the current camera channel.
- **PTZ type:** There are two types: local/remote. Please select local mode if you are connect RS485 cable to connect to the Speed dome (PTZ). Please select remote mode if you are connecting to the network PTZ camera.
- **Protocol:** Select corresponding PTZ protocol(such as PELCOD)
- **Address:** Default address is 1.
- **Baud rate:** Select corresponding baud rate. Default value is 9600.
- **Data bit:** Select corresponding data bits. Default value is 8.
- **Stop bit:** Select corresponding stop bits. Default value is 1.
- **Parity:** There are three options: odd/even/none. Default setup is none.

Figure 3-26

If you are connecting to network PTZ, the PTZ type shall be remote. See Figure 3-27.

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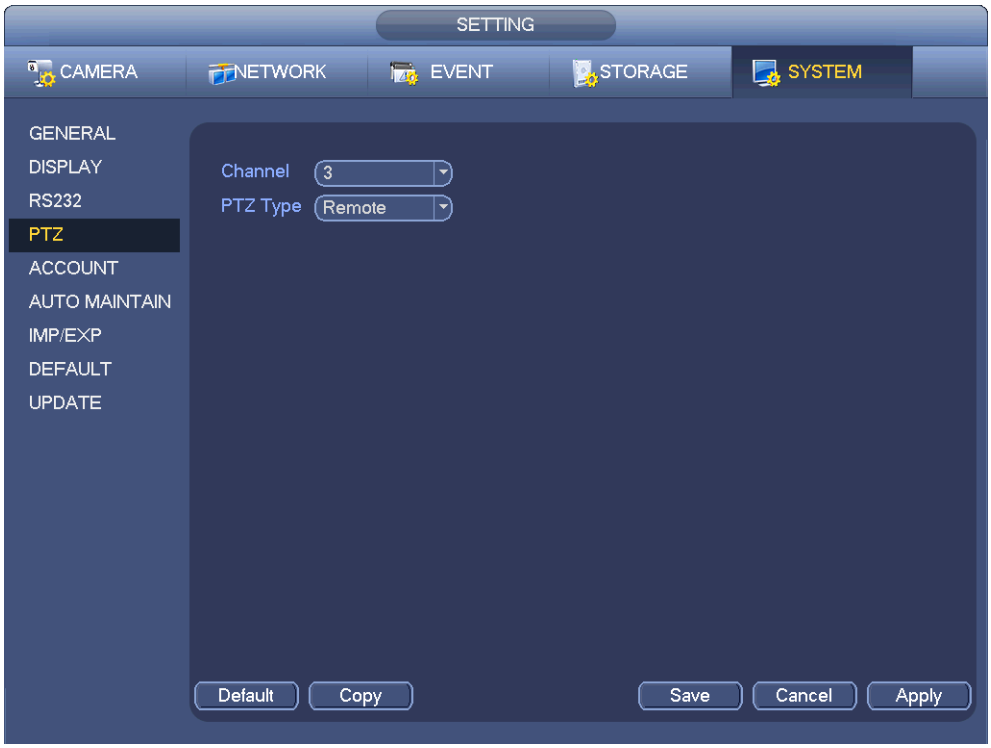

Figure 3-27

3.6.2 PTZ Control

After completing all the settings please click save button. Right click mouse (click “Fn” Button in the front panel or click “Fn” key in the remote control). The interface is shown in Figure 3-28. Please note you can only go to the PTZ control interface when you are in 1-window display mode.

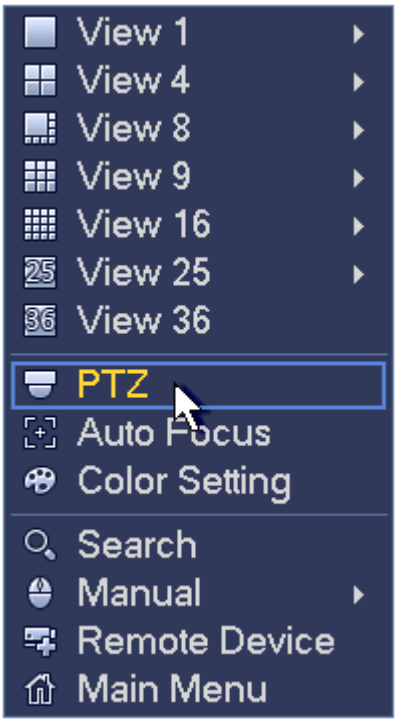

Figure 3-28

The PTZ setup is shown in See Figure 3-29.

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Please note the commend name is grey once device does not support this function.

The PTZ operation is only valid in one-window mode.

Here you can control PTZ direction, speed, zoom, focus, iris, preset, tour, scan, pattern aux function, light and wiper, rotation, etc..

Speed is to control PTZ movement speed. The value ranges from 1 to 8.The speed 8 is faster than speed 1. You can use the remote control to click the small keyboard to set.

You can click and to zoom to go in/out, to raise or lower focus definition and to open and close the iris to control the image brightness.

The PTZ rotation supports 8 directions. If you are using direction buttons on the front panel, there are only four directions: up/down/left/right.

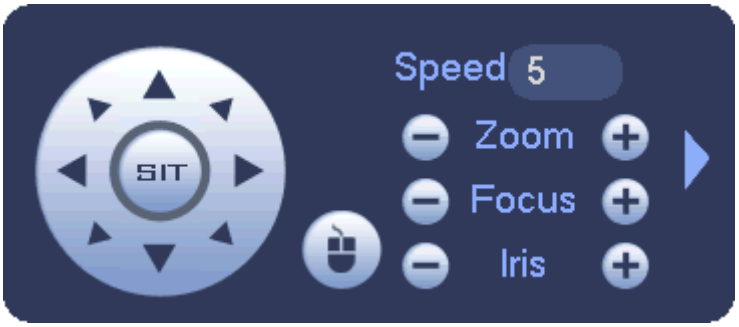

Figure 3-29

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 3-30. Please make sure your protocol supports this function and you need to use mouse to control.

Click this key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. The dragged zone supports 4X to 16X speeds. It can recognise the PTZ automatically. The smaller the zone you have dragged, the higher the speed.

Figure 3-30

Name	Function key	function	Shortcut key	Function key	function	Shortcut key
Zoom		Near	▮▸		Far	▸▸
Focus		Near	|◂		Far	▸|

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Iris		close	II ◀		Open	▶ II

In Figure 3-29, click to open the menu, you can set the preset, tour, pattern, scan, etc.. See Figure 3-31.

Figure 3-31

Please refer to the following sheet for detailed information.

Right click mouse or click the ESC button at the front panel to go back to the Figure 3-29.

Icon	Function	Icon	Function
	Preset		Flip
	Tour		Reset
	Pattern		Aux
	Scan		Aux on-off button
	Rotate		Go to menu

3.6.2.1 PTZ Function Setup

Click , and you can go to the following interface to set preset, tour, pattern, and scan. See Figure 3-32.

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Figure 3-32

Preset Setup

1. In Figure 3-32, click preset button and use eight direction arrows to adjust camera to the proper position. The interface is shown in Figure 3-33.

2. Click Set button and then input preset number.

3. Click Set button to save current preset.

Figure 3-33

Tour Setup

In Figure 3-32, click tour button.

Input tour value and preset number. Click Add preset button to add current preset to the tour. See Figure 3-34.

Tip:

Repeat the above steps to add more presets to the tour. Click Del preset button to remove it from the tour. Please note some protocols do not support delete preset function.

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Figure 3-34

Pattern Setup

In Figure 3-32, click Pattern button and input pattern number.

Click Begin button to start direction operation. Or you can go back to Figure 3-29 to operate zoom/focus/iris/direction operation.

In Figure 3-32, click End button.

Figure 3-35

Scan Setup

In Figure 3-32, click Scan button.

Use direction buttons to set camera left limit and then click Left button.

Use direction buttons to set camera right limit and then click Right button. Now the scan setup process is complete.

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Figure 3-36

3.6.2.2 Call PTZ Function

Call Preset

In Figure 3-31, input preset value and then click to call a preset. Click again to stop call.

Call Pattern

In Figure 3-31, input pattern value and then click to call a pattern. Click again to stop call.

Call Tour

In Figure 3-31, input tour value and then click to call a tour. Click again to stop call.

Call Scan

In Figure 3-31, input Scan value and then click to call a tour. Click again to stop call.

Rotate

In Figure 3-31, click to enable the camera to rotate.

System supports preset, tour, pattern, scan, rotate and light functions.

Notes:

- Preset, tour and pattern all need the value to be the control parameters. You can define it as you require.
- You need to refer to your camera user's manual for Aux definition. In some cases, it can be used for special process.

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Aux

Click , system goes to the following interface. The options here are defined by the protocol.

The aux number is corresponding to the aux on-off button of the decoder. See Figure 3-37.

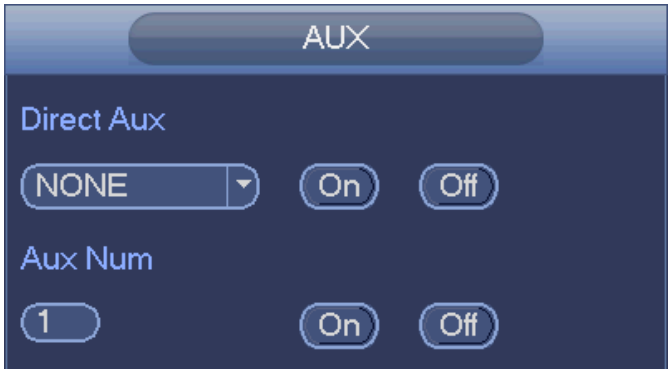

Figure 3-37

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3.7 Record and Snapshot

The record/snapshot priority is: **Alarm->Motion detect->Schedule.**

3.7.1 Encode

3.7.1.1 Encode

Encode setting is to set IPC encode mode, resolution, bit stream type, etc..

From **Main menu->Setting->System->Encode**, you can see the following interface. See Figure 3-38.

- **Channel**: Select the channel you want.
- **Type**: Please select from the dropdown list. There are three options: regular/motion detect/alarm. You can set the the various encode parameters for different record types.
- **Compression:** System supports H.264, MPEG4, MJPEG, etc..
- **Resolution:** The mainstream resolution type is IPC's encoding config. Generally there is D1/720P/1080P.
- **Frame rate**: It ranges from 1f/s to 25f/s in NTSC mode and 1f/s to 30f/s in PAL mode.
- **Bit rate type**: System supports two types: CBR and VBR. In VBR mode, you can set the video quality.
- **Quality:** There are six levels ranging from 1 to 6. The sixth level has the highest image quality.
- **Video/audio**: You can enable or disable the video/audio. Please note, once you enable audio function for one channel, system may enable audio function of the rest channels by default.
- **Copy**：After you complete the setup, you can click Copy button to copy current setup to other channel(s). You can see an interface is shown in Figure 3-41. You can see current channel number is grey. Please check the number to select the channel or you can check the box ALL. Please click the OK button in Figure 3-41 and Figure 3-39 respectively to complete the setup. Please note, once you check the 'All' box, you set same encode setup for all channels. Audio/video enable box overlay button and the copy button is shield.

Please highlight icon to select the corresponding function.

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Figure 3-38

3.7.1.2 Overlay

Click overlay button, you can see an interface is shown in Figure 3-39.

- **Cover area**: This is for you to cover area section. You can drag you mouse to set proper section size. In one channel video, system max supports 4 zones in one channel. You can set the with Fn button or direction buttons.
- **Preview/monitor:** The cover area has two types. Preview and Monitor. Preview means the privacy mask zone cannot be viewed by user when system is in preview status. Monitor means the privacy mask zone cannot be view by the user when system is in monitor status.
- **Time display:** You can select system displays time or not when you playback. Please click set button and then drag the title to the corresponding position in the screen.
- **Channel display:** You can select system displays channel number or not when you playback. Please click set button and then drag the title to the corresponding position in the screen.

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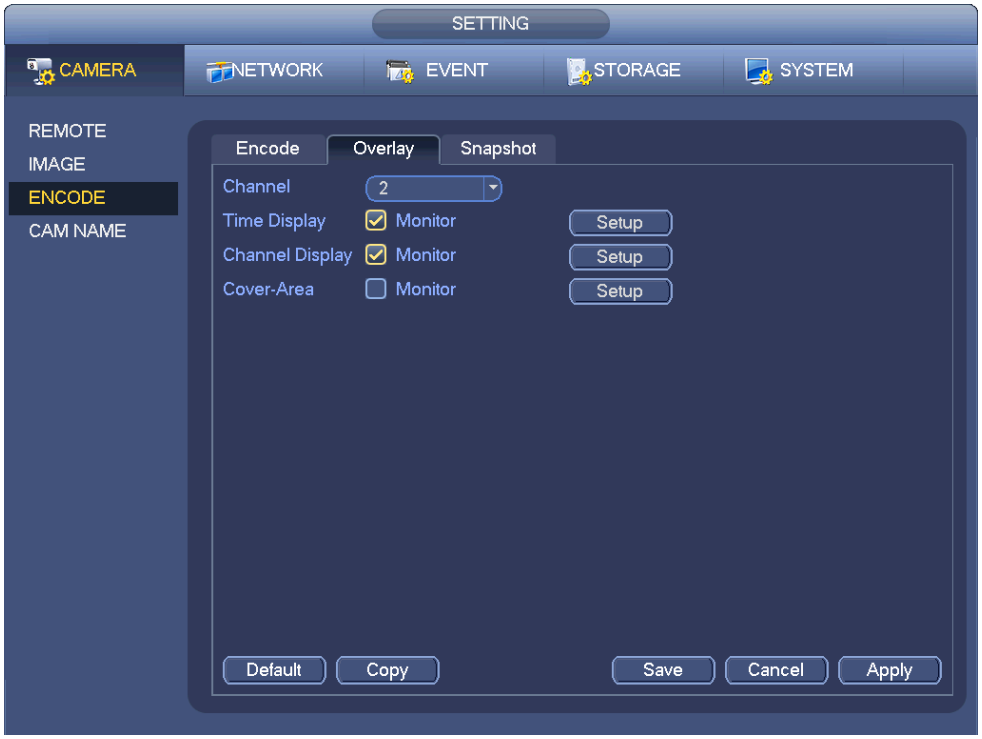

Figure 3-39

3.7.1.3 Snapshot

Here you can set the snapshot mode, picture size, quality and frequency. See Figure 3-40.

- **Snapshot mode:** There are two modes: regular and trigger. If you set regular mode, you need to set snapshot frequency. If you set trigger snapshot, you need to set snapshot activation operation.
- **Image size:** Here you can set the snapshot picture size.
- **Image quality:** Here you can set the snapshot quality. The value ranges from 1 to 6.
- **Interval:** This is for you to set timing (schedule) snapshot interval.

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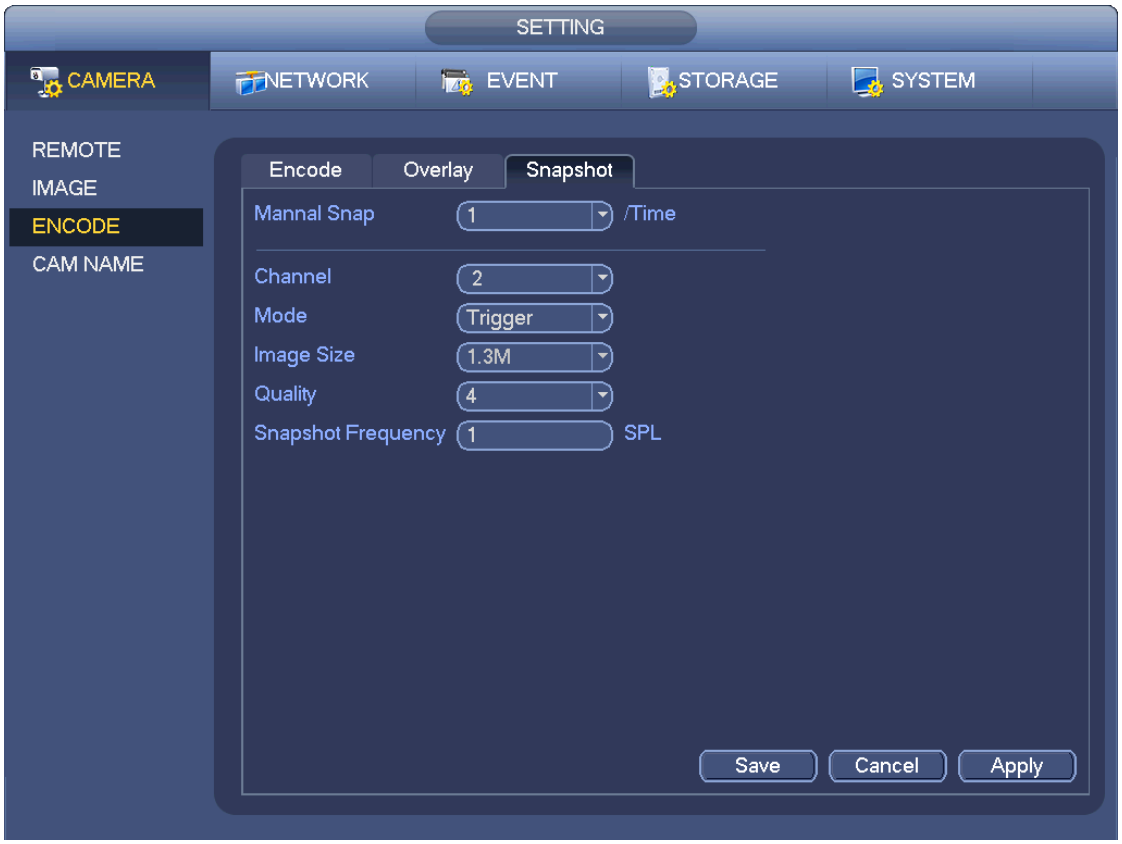

Figure 3-40

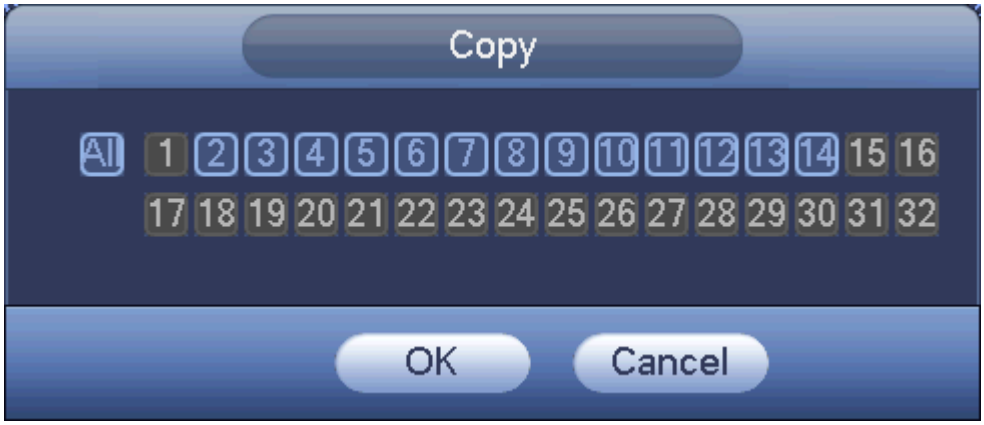

Figure 3-41

3.7.2 Schedule

The record type priority is: Alarm>Motion detect>Regular.

3.7.2.1 Schedule Record

Set record time, record plan, etc.. Please note system is in 24-hour record by default after its first boot up.

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In the main menu, from **Main menu->Setting->Storage->Schedule**, you can go to schedule menu. See Figure 3-45. There are total six periods.

1. **Channel:** Please select the channel number first. You can select “all” if you want to set for the whole channels.
2. : Sync connection icon. Select icon of several dates, all checked items can be edited or together. Now the icon is shown .
3. : Click it to delete a record type from one period.
4. **Record Type**: Please check the box to select corresponding record type. There are four types: Regular/MD (motion detect)/Alarm/MD & Alarm).
5. **Week day:** There are eight options: ranges from Saturday to Sunday and all.
6. **Holiday**: This is to set holiday setup. Please note you need to go to the General interface (**Main Menu->Setting->System->General**) to add holiday first. Otherwise you cannot see this item.
7. **Pre-record**: System can pre-record the video before the event occurs into the file. The value ranges from 1 to 30 seconds depending on the bit stream.
8. **Redundancy**: System supports redundancy backup function. It allows you to backup recorded file in two disks. You can highlight Redundancy button to activate this function. Please note, before enable this function, please set at least one HDD as redundant. (**Main menu->Setting->Storage->HDD Manager**). **Please note this function is null if there is only one HDD.**
9. **ANR**: This is to save video to the SD card of the network camera in case the network connection fails. The value ranges from 0s～43200s. After the network connection resumed, the system can get the video from the SD card and there is no risk of record loss.
10. **Period setup**: Click button after one date or a holiday, you can see an interface shown in Figure 3-46.There are four record types: regular, motion detection (MD), Alarm, MD & alarm.

Please following the steps listed below to draw the period manually.

a) Select a channel you want to set. See Figure 3-42.

Figure 3-42

b) Set record type. See Figure 3-43.

Figure 3-43

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c) Please draw manually to set record period. There are six periods in one day. See Figure 3-44.

Figure 3-44

Please check the box ☐ to select the corresponding function. After completing all the setups please click save button, system goes back to the previous menu.

There are color bars for your reference. Green color stands for regular recording, yellow color stands for motion detection and red color stands for alarm recording. The white means the MD and alarm record is valid. Once you have set to record when the MD and alarm occurs, system will not record neither motion detect occurs nor the alarm occurs.

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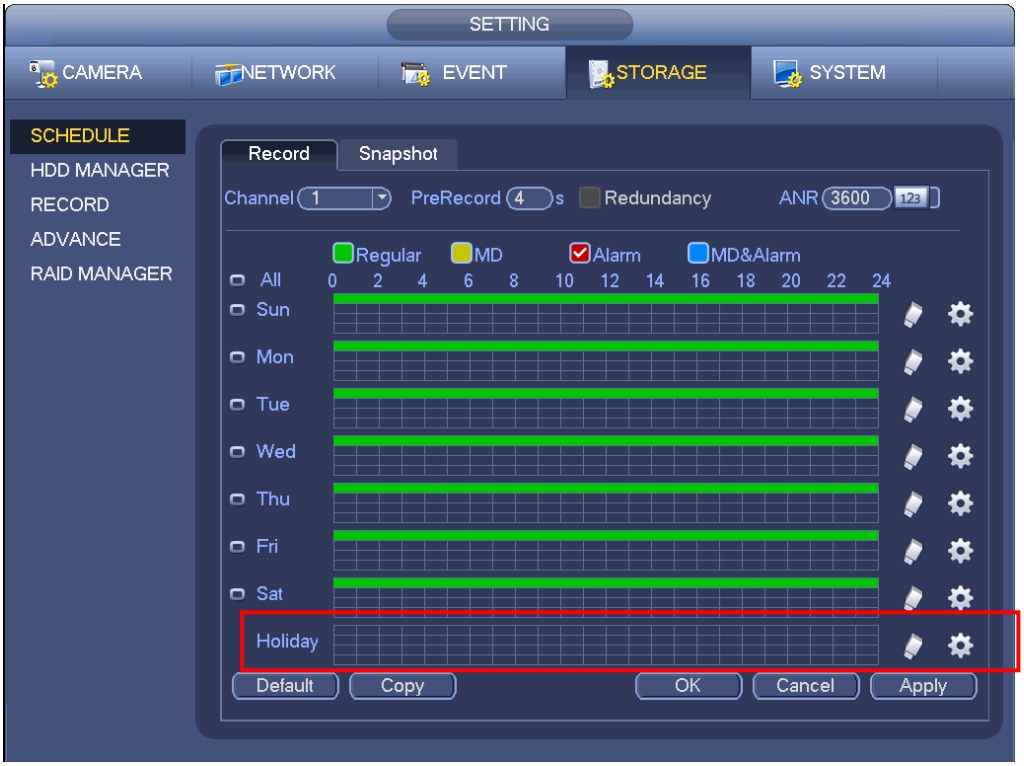

Figure 3-45

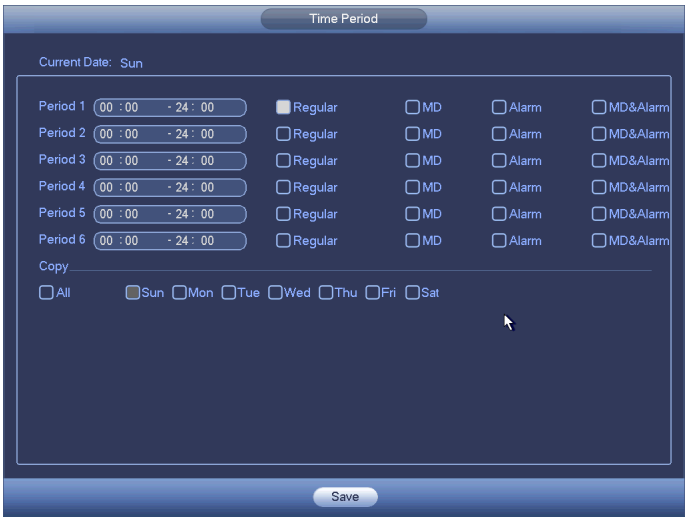

Figure 3-46

Quick Setup

The Copy function allows you to copy one channel setup to another. After setting in channel 1, click Copy button, you can go to interface Figure 3-47. You can see current channel name is grey such as channel 1. Now you can select the channel you want to paste such as channel 5/6/7. If you want to save current setup of channel 1 to all channels, you can click the first box “ALL”. Click the OK button to save current copy setup. Click the OK button in the Encode interface, the copy function succeeded.

Please note, if you select ALL in Figure 3-47, the record setup of all channels are the same and the Copy button becomes hidden.

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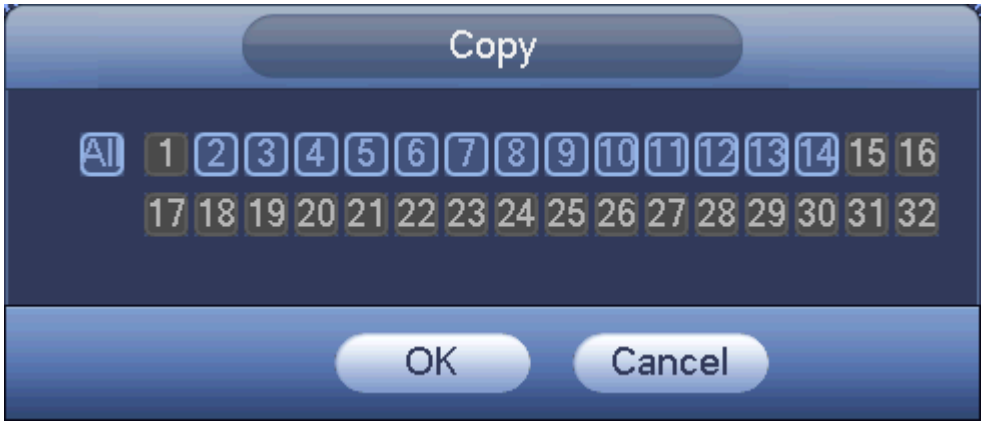

Figure 3-47

Click OK button to save current setup.

3.7.2.2 Schedule Snapshot

From **Main menu->Setting->Storage->Record** or on the preview interface, right click mouse and then select record item, you can see Figure 3-48.

Select snapshot channel and enable snapshot function. Then click the Save button.

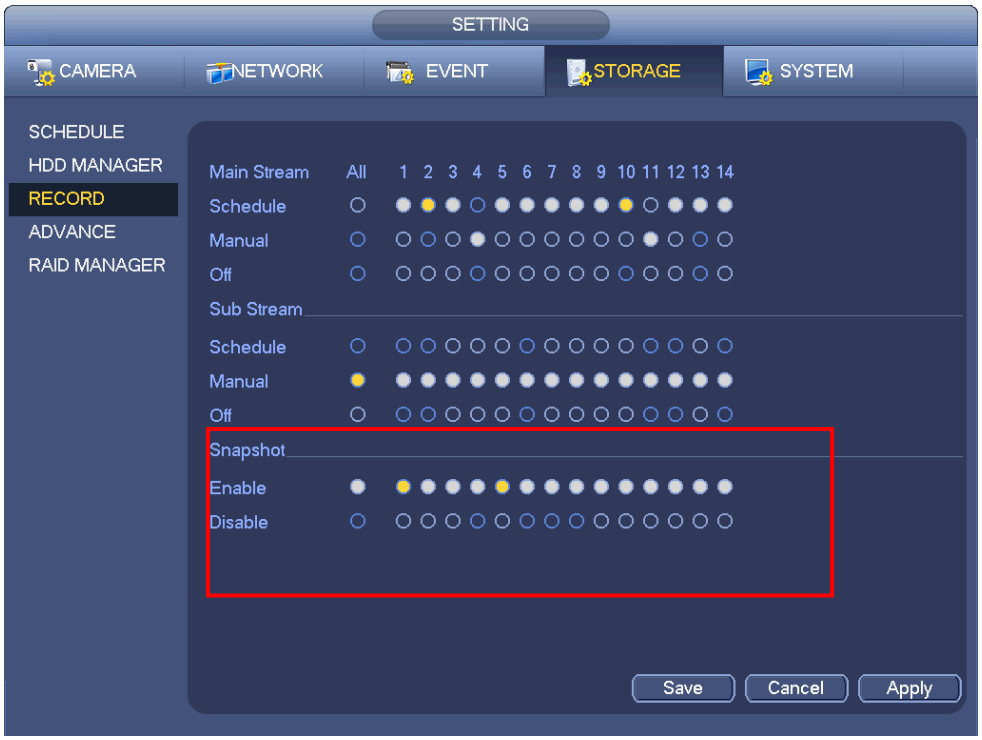

Figure 3-48

From **Main menu->Setting->Camera->Encode->Snapshot**, you can go to snapshot interface. See Figure 3-49.

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Select the snapshot channel from the dropdown list and then select snapshot mode as Timing (Schedule) from the dropdown list and then set picture size, quality and snapshot frequency.

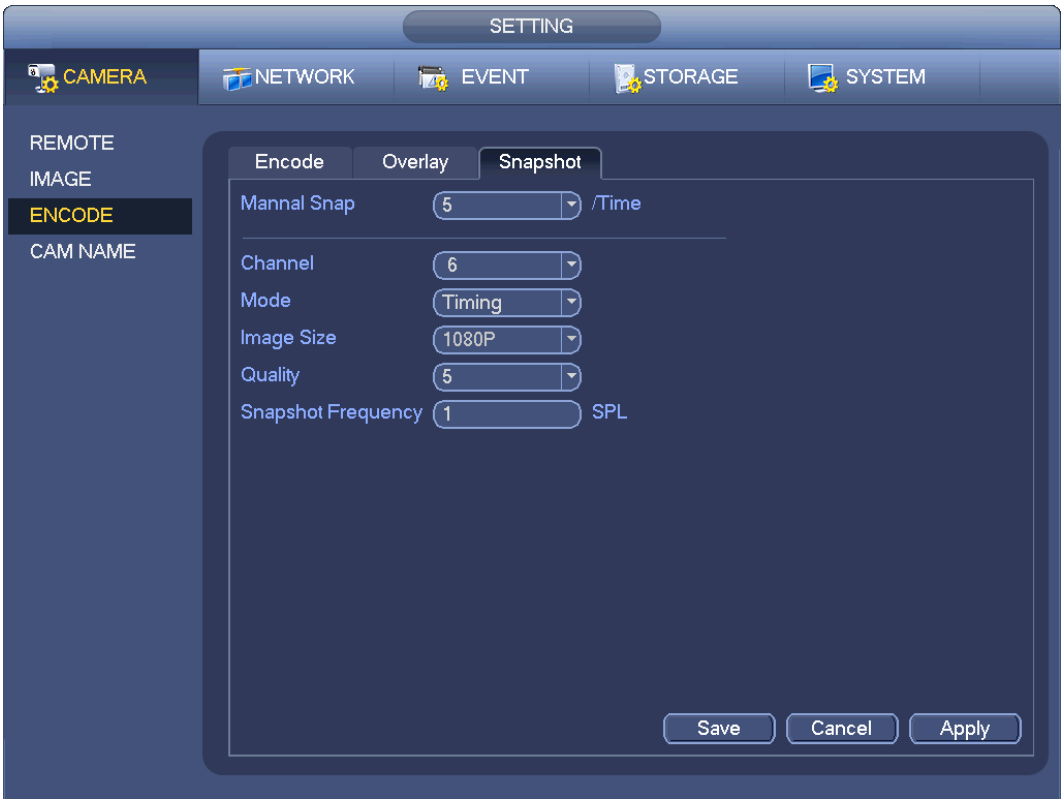

Figure 3-49

In the main menu, from **Main menu->Setting->Storage->Schedule**, you can go to schedule menu. See Figure 3-45. Here you can set the snapshot period. There are total six periods in one day. Please refer to chapter 3.7.2.1 for detailed setup information. The setup steps are general the same.

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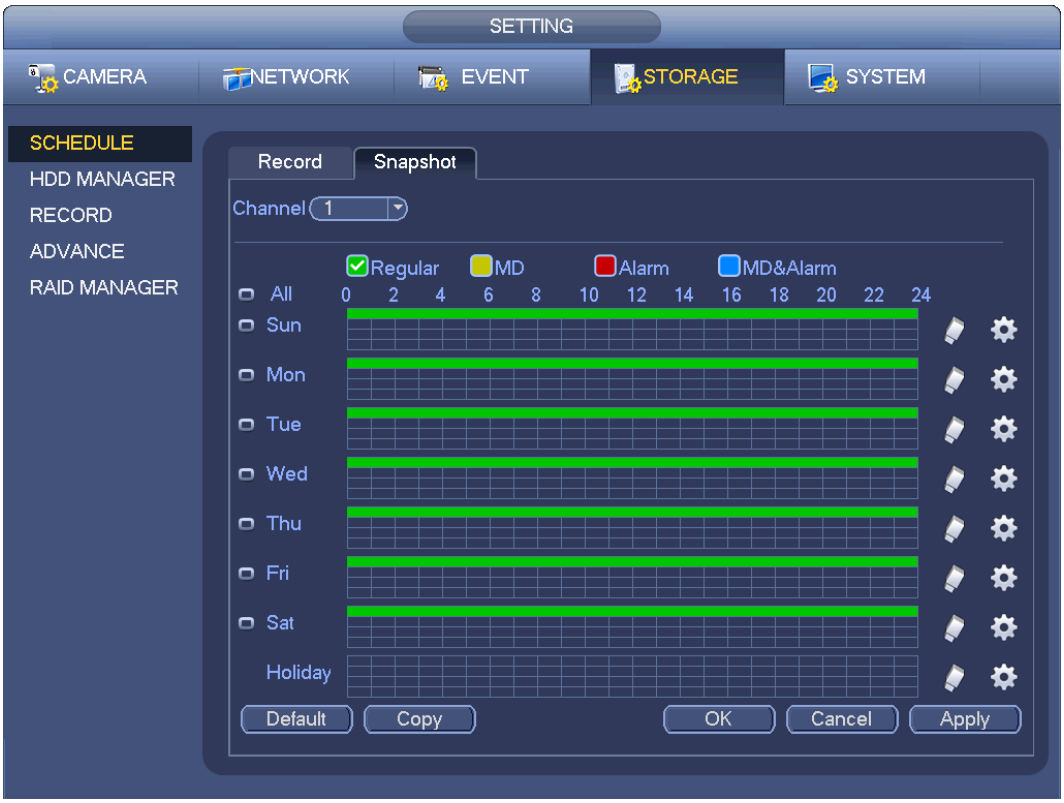

Figure 3-50

Note

- Please note the trigger snapshot has the higher priority than regular snapshot. If you have enabled these two types at the same time, system can activate the trigger snapshot when an alarm occurs, and otherwise system just operates the regular snapshot.
- Only the trigger snapshot supports this function. The regular snapshot function cannot send out picture via the email. But you can upload the picture to a FTP.

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3.7.3 Motion detect record/snapshot

3.7.3.1 Motion detect record

a) From **Main menu->Setting->Event->Detect**, you can go to the following interface. See Figure 3-51.

Figure 3-51

b) Select motion detect from the event type dropdown list. Select a channel from the dropdown list and then check the enable button to enable motion detect function.

c) Click Region Select button to set motion detect zone. There are 396(PAL)/330(NTSC) small zones. The green zone is current cursor position. Grey zone is the motion detection zone. Black zone is the disarmed zone. You can click Fn button to switch between the arm mode and disarm mode. In arm mode, you can click the direction buttons to move the green rectangle to set the motion detection zone. After you completed the setup, please click ENTER button to exit current setup. Do remember to click the save button to save current setup. If you click ESC button to exit the region setup interface system will not save your zone setup.

d) Period: Click set button, you can see an interface is shown in Figure 3-74. Here you can set the motion detect period. System only enables motion detect operation in the specified periods. This is not for video loss or the tampering. There are two ways for you to set periods. Please note system only supports 6 periods in one day.

✧ In Figure 3-74, Select icon of several dates, all checked items can be edited together. Now the icon is shown . Click to delete a record type from one period.

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✧ In Figure 3-74. Click button after one date or a holiday, you can see an interface shown in Figure 3-75. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.

e) Set sensitivity. Please note the sixth level has the highest sensitivity.
f) Click Save button to complete motion detect setup.
g) From **Main menu->Setting->Storage->-Schedule**. See Figure 3-45
h) Set motion detect record channel, period and the record type shall be motion detect (MD). Please refer to chapter 3.7.2.
i) Click Copy button to copy current setup to other channel(s).
j) Click OK button to complete motion detect record setup.

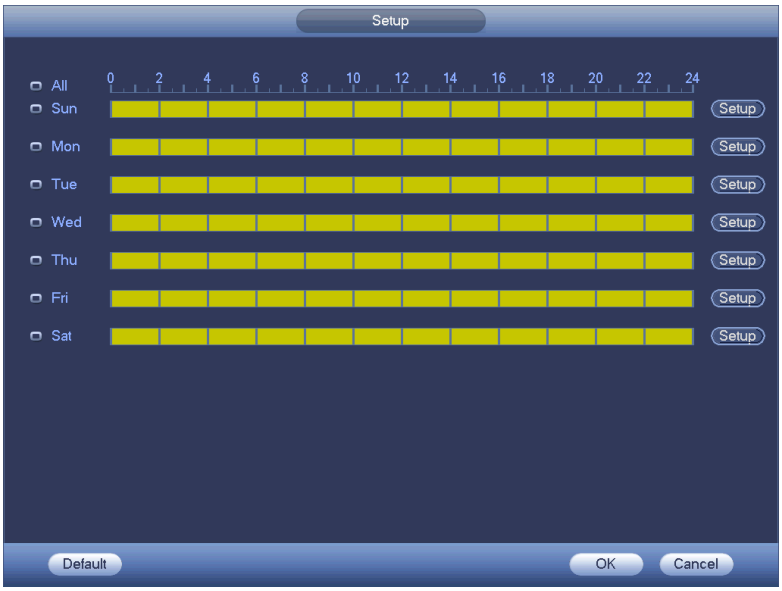

Figure 3-52

Time Period
Current Date: Sun
Period 1 00 : 00 - 24 : 00
Period 2 00 : 00 - 24 : 00
Period 3 00 : 00 - 24 : 00
Period 4 00 : 00 - 24 : 00
Period 5 00 : 00 - 24 : 00
Period 6 00 : 00 - 24 : 00
Copy
All Sun Mon Tue Wed Thu Fri Sat
Save

Figure 3-53

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3.7.3.2 Motion Detect Snapshot

a) From **Main menu->Setting->Camera->Encode->Snapshot**, you can go to snapshot interface. See Figure 3-54.
b) In Figure 3-54, select trigger snapshot from the dropdown list and then set picture size, quality and snapshot frequency. Click OK button to save current setup.
c) From **Main menu->Setting->Event->Detect**, here you can select motion detect type, motion detect channel and then check the enable box. Please refer to chapter 3.7.3.1.
d) Click OK button to complete motion detect setup.

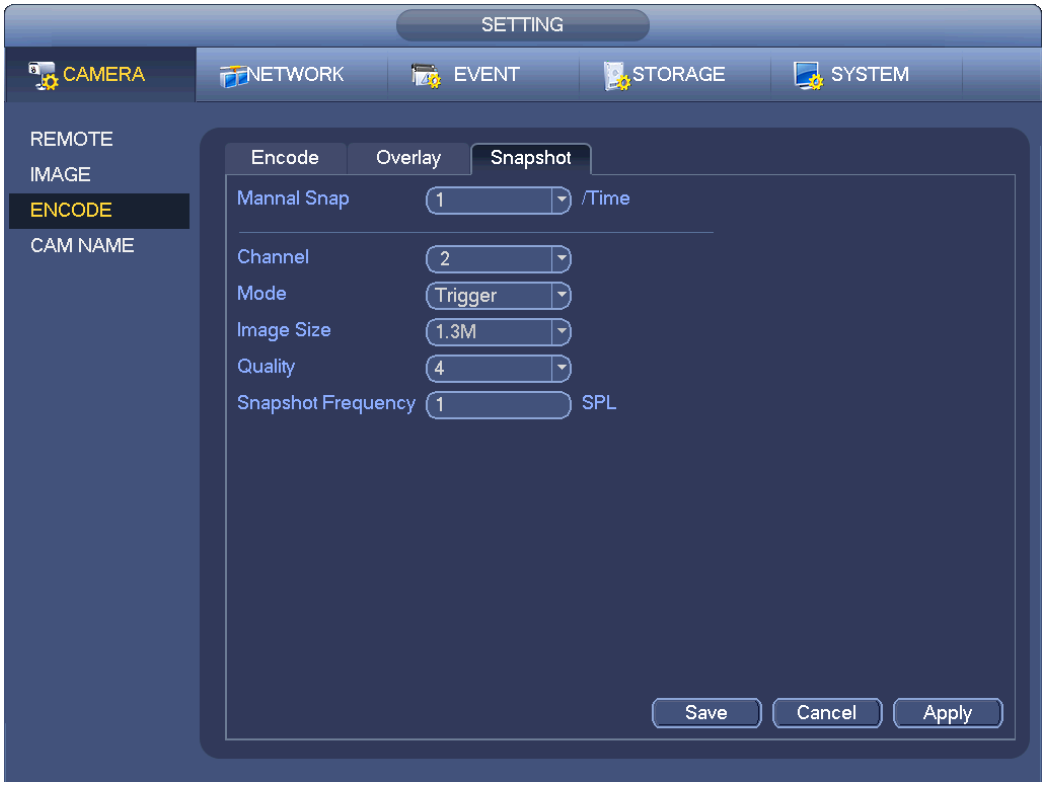

Figure 3-54

3.7.4 Alarm Record/Snapshot

3.7.4.1 Alarm Record

a) Before you set alarm setup information, please go to chapter **Error! Reference source not found.** to connect alarm input and alarm output cable (such as light, siren , etc.).
b) The record priority is: **Alarm>Motion detect>Regular**.

In the main menu, from **Setting->Event-> Alarm**, you can see alarm setup interface. See Figure 3-55.

1. **Alarm in**: This is for you to select channel number.
2. **Event type**: There are four types. Local input/network input/IPC external/IPC offline alarm.

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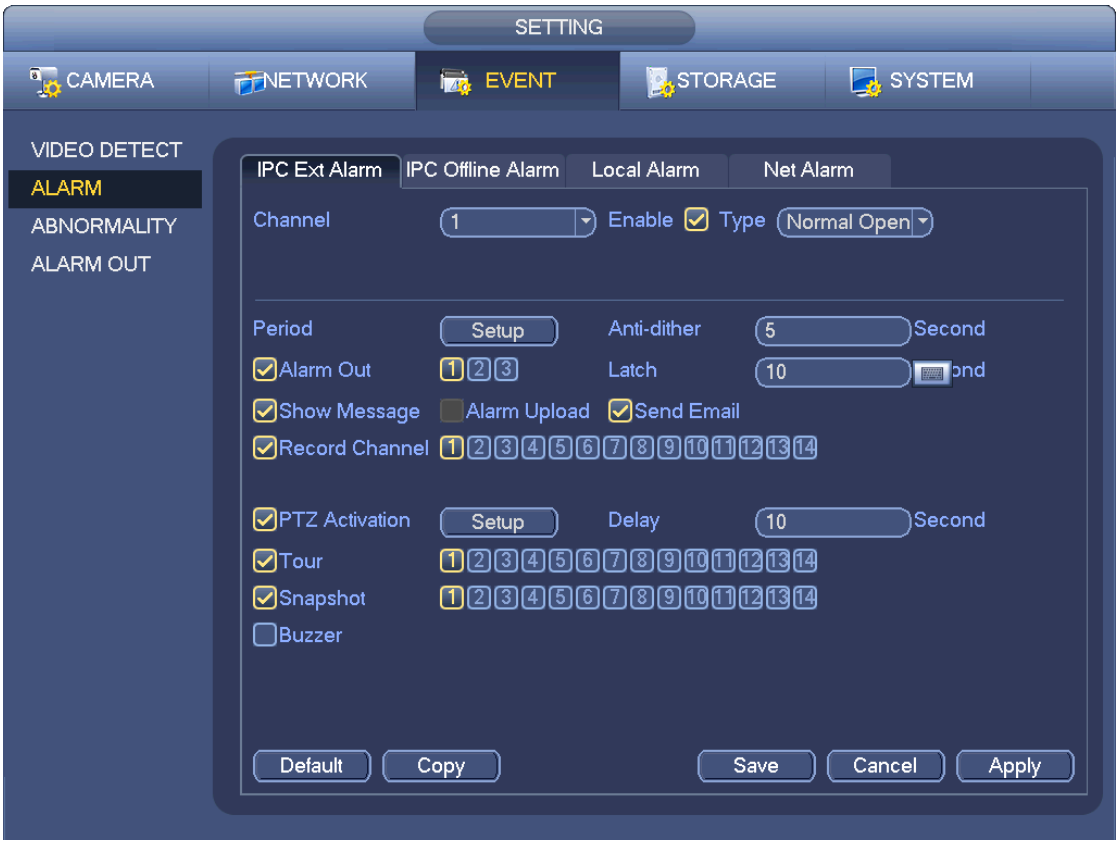
a. **Network input alarm**: This is the alarm signal from the network.
b. **IPC external alarm**: This is the on-off alarm signal from the front-end device and can activate the local NVR.
c. **IPC offline alarm**: Once you select this item, system can generate an alarm when the front-end IPC disconnects with the local NVR. The alarm can activate record, PTZ, snapshot, etc.. The alarm can last until the IPC and the NVR connection resumes.

3. **Enable**: Please you need to highlight this button to enable current function.
4. **Type**: normal open or normal close.
5. Click Save button to complete alarm setup interface.
6. 

7. Figure 3-55

8. From **Main menu->Setting->Storage->Schedule**, you can go to Figure 3-45.
9. Select alarm channel, period and the record type shall be alarm. Please refer to chapter 3.7.2.
10. Click Copy button to copy current setup to other channel(s).
11. Click OK button to save alarm record information.

3.7.4.2 Alarm Snapshot

a) Please refer to Step a) to step c) of chapter 3.7.3.2 to enable timing snapshot.
b) From **Main menu->Setting->Storage->schedule**, you can go to Figure 3-56 to enable snapshot function.

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c) From **Main menu->Setting->Event->Alarm**, you can go to Figure 3-55 to set alarm parameter and enable snapshot function.

d) Click Save button to save alarm snapshot setup.

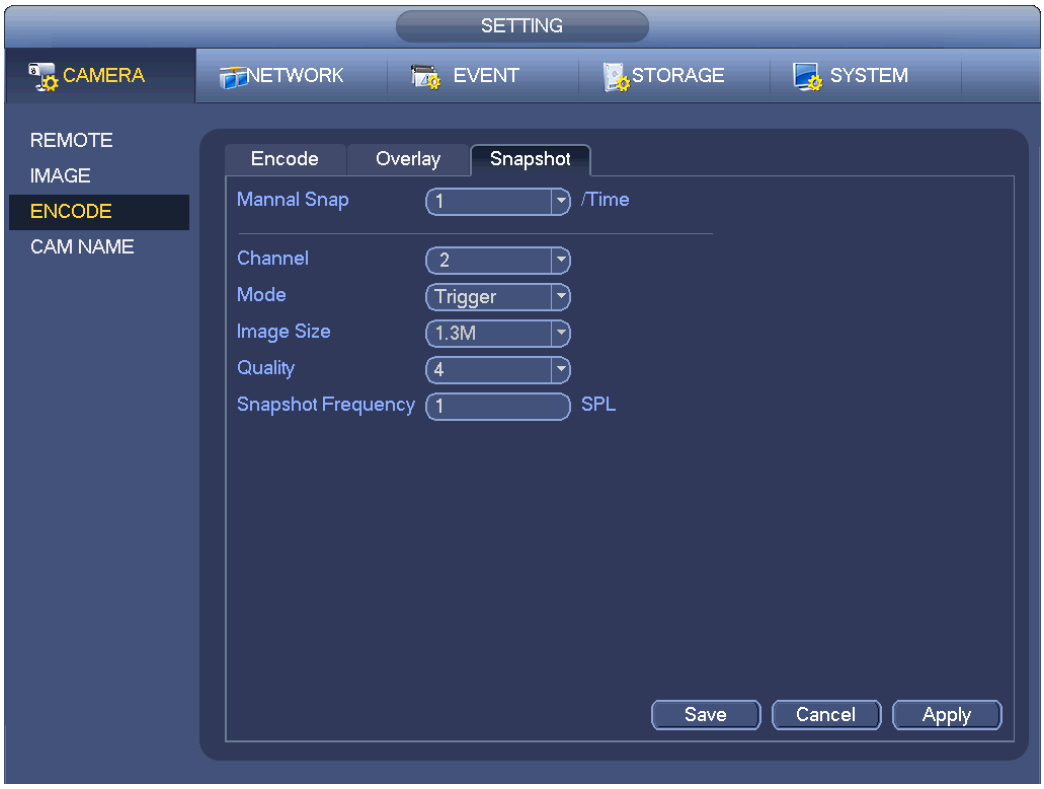

Figure 3-56

3.7.5 Manual Record/Snapshot

You need to have proper rights to implement the following operations. Please make sure the HDD has been properly installed.

3.7.5.1 Manual Record

a) Right click mouse and select manual record or in the main menu, from Setting->Storage->Manual Record. Manual record menu is shown in Figure 3-57.

Tip: You can click Rec button on the front panel (if possible) to go to the Manual Record interface.

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Figure 3-57

b) Check the box here to select manual record channel(s). You can see the corresponding indicator light on the front panel is on.

- **Channel**: This is to display the device all channels.
- **Manual**: This has the highest priority. Enable corresponding channel to record no matter what period applied in the record setup. Now system is record general file.
- **Auto**: System enables auto record function as you set in chapter 3.7.2 schedule interface (General/Motion detect/Alarm)
- **Stop**: Stop current channel record/Snapshot no matter what period applied in the record setup.
- **All**: Check the All box to select all channels.

c) Click OK button to complete manual record setup.

3.7.5.2 Manual Snapshot

Click button at the preview control bar, you can snapshot 1-5 picture(s). From **main menu->Setting->Camera->Encode->Snapshot**, you can set the snapshot times. You can go to chapter 3.8 to view snapshot picture.

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3.7.6 Holiday Record/Snapshot

This is for you to set holiday record or snapshot plan. Please note the holiday record/snapshot setup has the higher priority than the ordinary date record/snapshot setup.

3.7.6.1 Holiday Record

a) From **Main menu->Setting->System->General**, you can go to the following interface. See Figure 3-58.

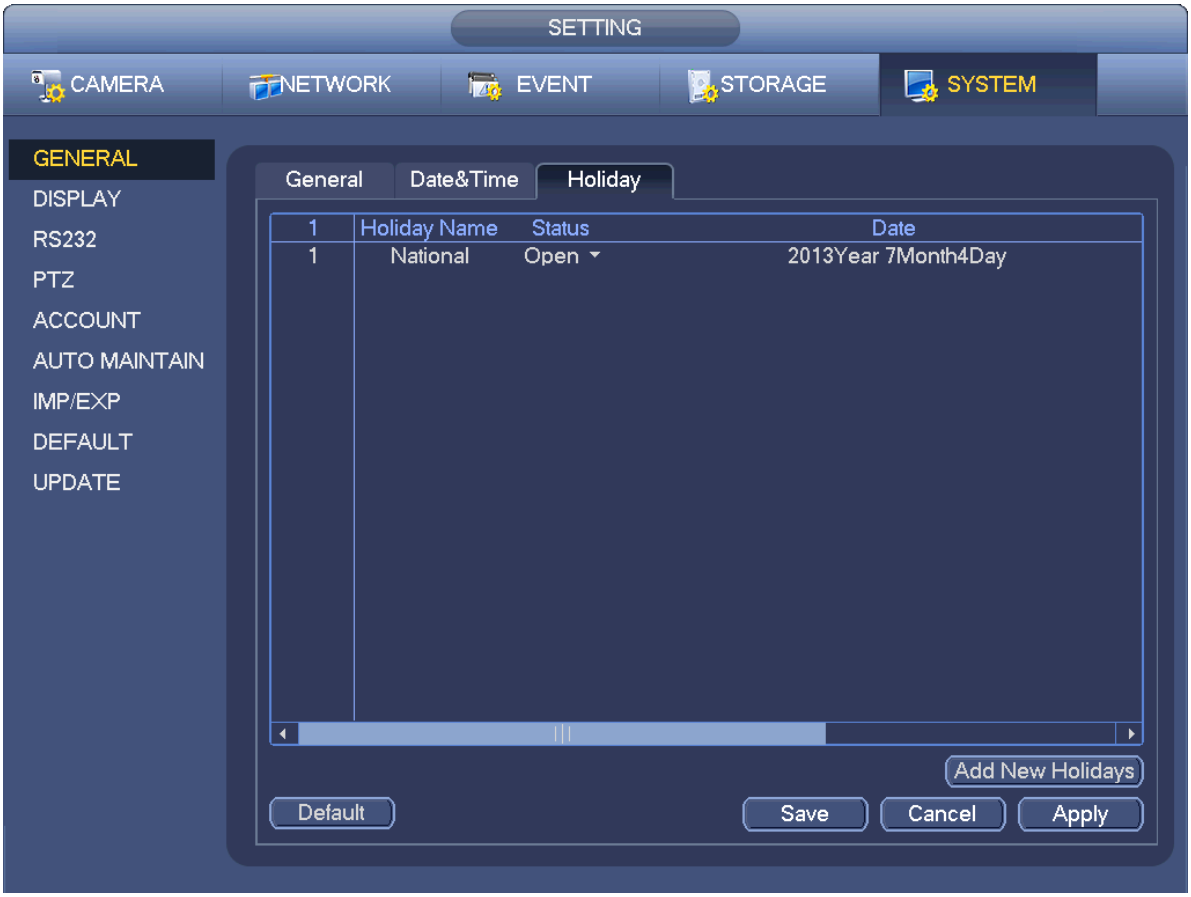

Figure 3-58

b) Click the Add new holiday button, you can see an interface shown in Figure 3-59. Here you can set the holiday date name, repeat mode, start time/end time, etc..

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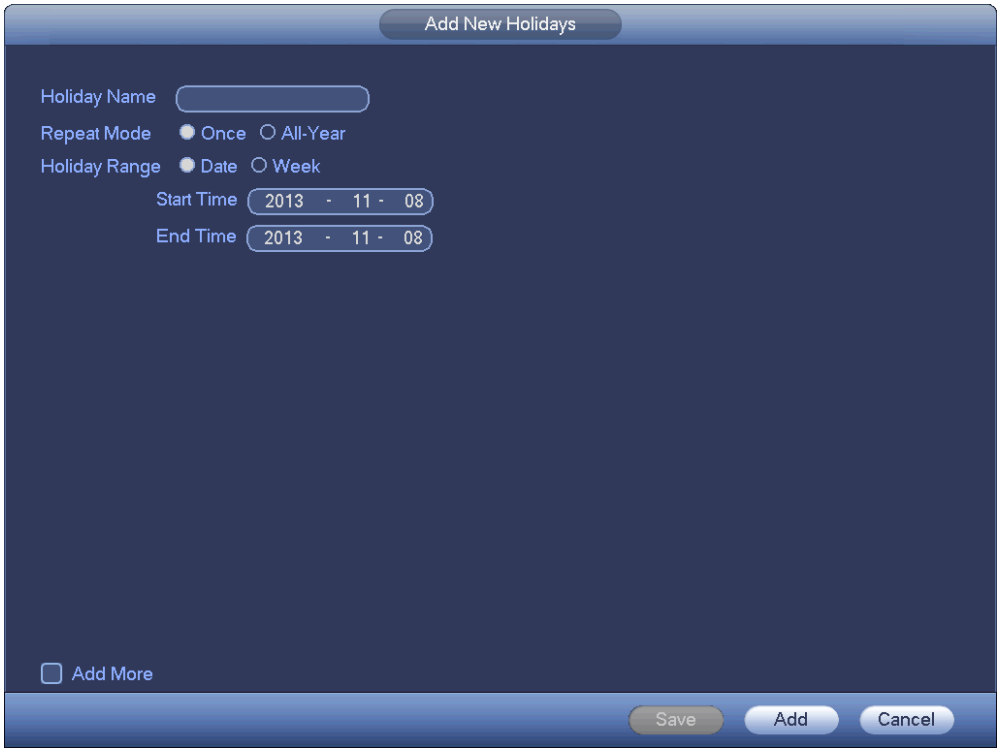

Figure 3-59

c) Click Add button to complete holiday setup. Now you can enable holiday setup and then click Apply button.

d) From **Main menu->setting->Storage->schedule**, you can go to the schedule interface. See Figure 3-60. Now you can set the period and record type of holiday time. Please refer to chapter 3.7.2.1 for detailed setup information.

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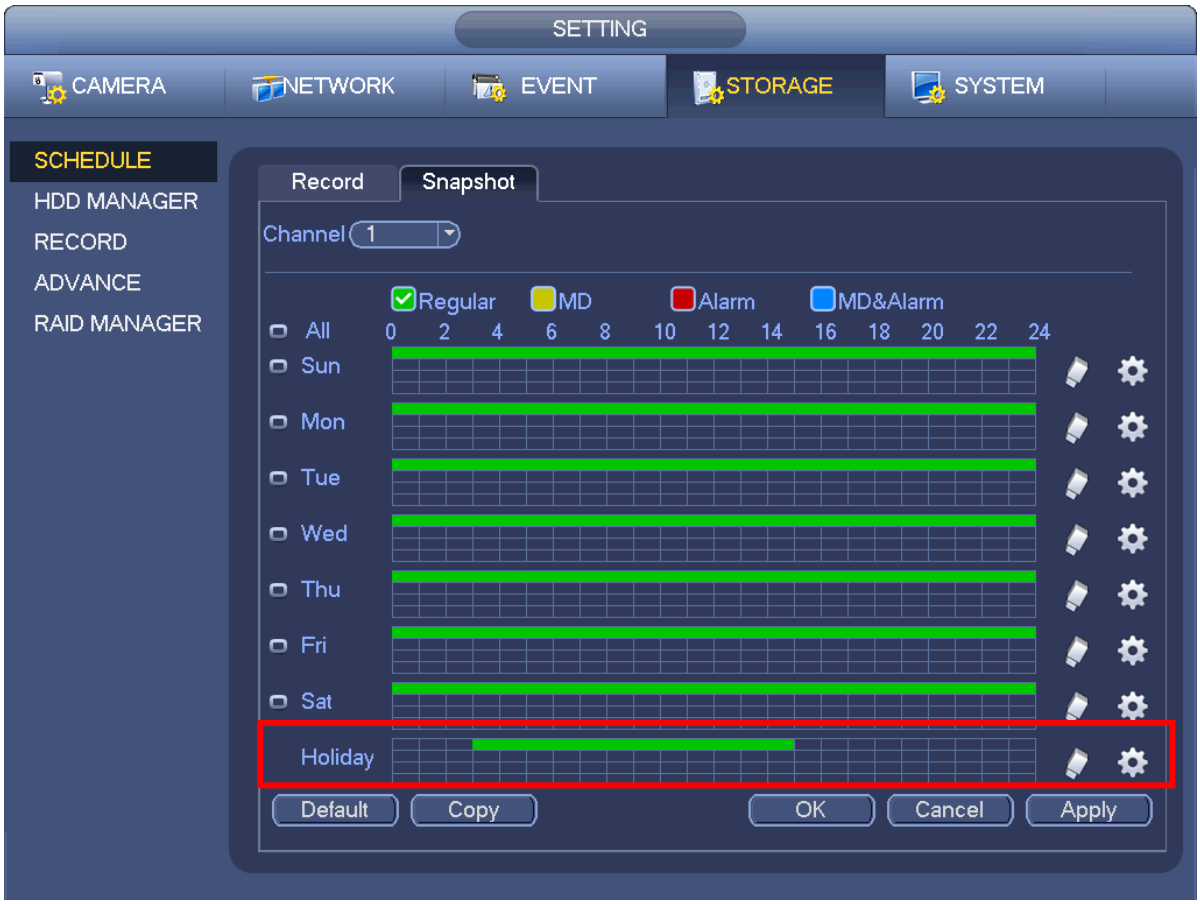

Figure 3-60

e) Click OK button to set holiday record setup.

3.7.6.2 Holiday Snapshot

Set Holiday date first. Please refer to step a) to step c) of chapter 3.7.6.1.

From **Main menu->Setting->Storage->Schedule**, you can go to schedule interface. See Figure 3-60. Click Holiday item to set snapshot period.

Set holiday snapshot type (Trigger/Regular). Please refer to chapter 3.7.2.2 or chapter 3.7.3.2.

3.7.7 Other Record/Snapshot

For Motion Detect & Alarm record or snapshot, please refer to chapter 3.7.4.

Video loss or tampering record or snapshot function, please refer to chapter 3.7.3.

3.8 Playback and Search

3.8.1 Real-time Playback

Please refer to chapter 3.5.2 for real-time playback information.

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3.8.2 Search Interface

From **Main menu->Search**, or on the preview interface, right click mouse and then select search item, you can go to the following interface. See Figure 3-61.

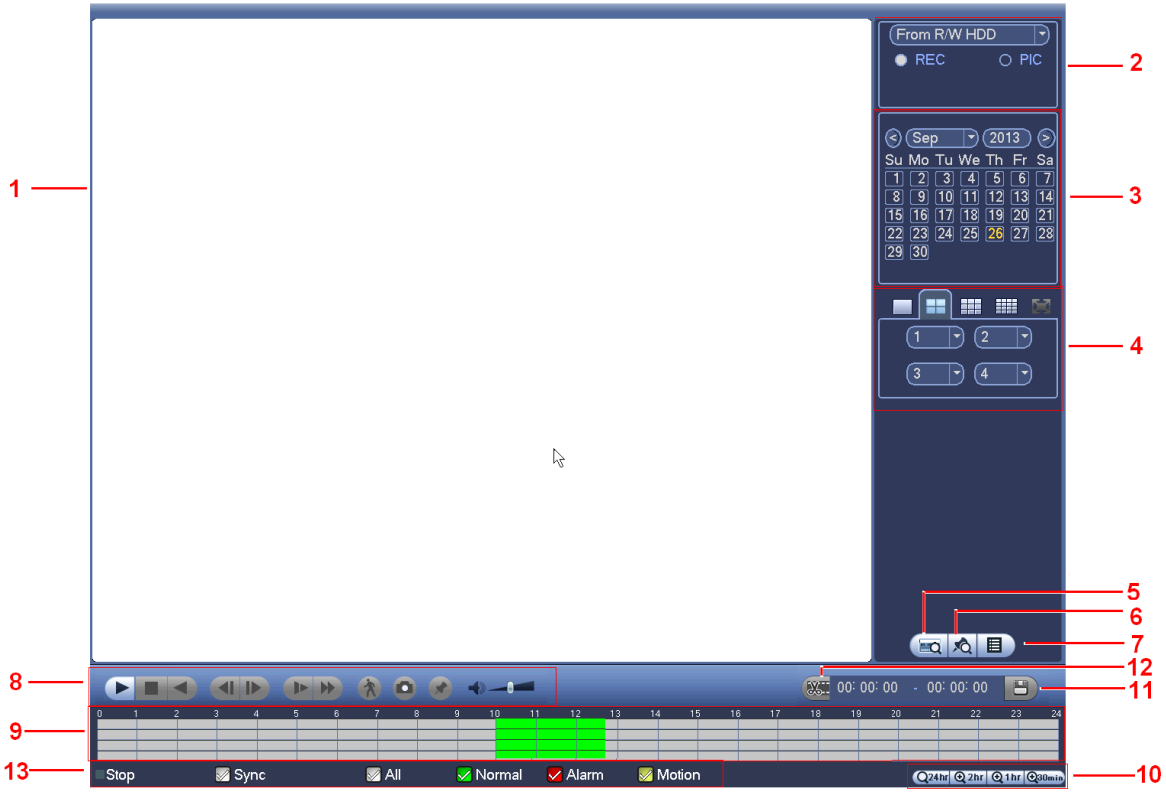

Figure 3-61

Please refer to the following sheet for more information:

SN	Name	Function
1	Display window	• This displays the searched picture or file. • Support 1/4/9/16-window playback.
2	Search type	• Here you can select to search the picture or the recorded file. • You can select to play from the read-write HDD, from peripheral device or from redundancy HDD. • Before you select to play from the peripheral device, please connect the corresponding peripheral device. You can view all record files of the root directory of the peripheral device. Click the Browse button; you can select the file you want to play. **Important** • **Redundancy HDD does not support picture backup function, but it supports picture playback function. You can select to play from redundancy HDD if there are pictures on the redundancy HDD.**
3	Calendar	• The blue highlighted date means there is a picture or file. Otherwise, there is no picture or file.

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<table>
<tr><td></td><td></td><td colspan="2">• In any play mode, click the date you want to see, you can see the corresponding recorded file trace along in the time bar.</td></tr>
<tr><td>4</td><td>Playback mode and channel selection pane.</td><td colspan="2">• Playback mode：1/4/9/16. (It may vary due to different series.)
✧ In 1-window playback mode: you can select 1-X channels (X depends on the product channel amount).
✧ In 4-window playback mode: you can select 4 channels according to your requirement.
✧ In 9-window playback mode, you can switch between 1-8, 9-16 , etc. channels.
✧ In 16-window playback mode, you can switch between1-16, 17-32 , etc. channels.
• The time bar will change once you modify the playback mode or the channel option.</td></tr>
<tr><td>5</td><td>Card number search</td><td colspan="2">The card number search interface is shown below. Here you can view card number/field setup bar. You can implement advanced search.
</td></tr>
<tr><td>6</td><td>Mark file list button</td><td colspan="2">Click this to go to mark file list interface. You can view all mark information of current channel by time. Please refer to chapter 3.8.2.3 for detailed information.</td></tr>
<tr><td>7</td><td>File list switch button</td><td colspan="2">• Double click it; you can view the picture/record file list of current day.
• The file list is to display the first channel of the record file.
• The system can display max 128 files in one time. Use the ◀| and |▶ or the mouse to view the file. Select one item, and then double click the mouse or click the ENTER button to playback.
• You can input the period in the following interface to begin accurate search.
• File type：R—regular record； A—external alarm record；M—Motion detect record.

• Lock file. Click the file you want to lock and click the button to lock. The file you locked will not be overwritten.
• Search locked file: Click the button to view the locked file.</td></tr>
<tr><td rowspan="3">8</td><td rowspan="3">Playback control pane.</td><td>►/ II</td><td>Play/Pause
There are three ways for you to begin playback.
● The play button
● Double click the valid period of the time bar.
● Double click the item in the file list.
In slow play mode, click it to switch between play/pause.</td></tr>
<tr><td>■</td><td>Stop</td></tr>
<tr><td>◀</td><td>• Backward play
• In normal play mode, left click the button, the file begins backward play. Click it again to pause the current play.
• In backward play mode, click ►/ II to restore normal play.</td></tr>
</table>

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		⏮/⏭	• In playback mode, click it to play the next or the previous section. You can click continuously when you are watching the files from the same channel. • In normal play mode, when you pause the current play, you can click ◀⏮ and ⏭▶ to begin frame by frame playback. • In frame by frame playback mode, click ▶/⏸ to restore normal playback.
		▶·	Slow play In playback mode, click it to cycle through various slow play modes such as slow play 1, slow play 2, etc..
		⏩	Fast forward In playback mode, click to cycle through various fast play modes such as fast play 1,fast play 2 , etc..
			Smart search
			The volume of the playback
			• Click the snapshot button in the full-screen mode, the system can snapshot 1 picture. • System supports custom snap picture saved path. Please connect the peripheral device first, click snap button on the full-screen mode, you can select or create path. Click Start button, the snapshot picture can be saved to the specified path.
			• Mark button. • Please note this function is for some series product only. Please make sure there is a mark button in the playback control pane. • You can refer to chapter 3.8.2.3 for detailed information.
9	Time bar	• This is to display the record type and its period in current search criteria. • In 4-window playback mode, there are corresponding four time bars. In other playback mode, there is only one time bar. • Use the mouse to click one point of the color zone in the time bar, system begins playback. • The time bar is begins with 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file. • The green color stands for the regular record file. The red color stands for the external alarm record file. The yellow stands for the motion detect record file.	
10	Time bar unit	• The option includes: 24H, 12H, 1H and 30M. The smaller the unit, the larger the zoom rate. You can accurately set the time in the time bar to playback the record. • The time bar is beginning with 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file.	

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11	Backup	• Select the file(s) you want to backup from the file list. You can check from the list. Then click the backup button, now you can see the backup menu. System supports a customised path setup. After select or create new folder, click the Start button to begin the backup operation. The record file(s) will be saved in the specified folder. • Check the file again you can cancel current selection. System can display a maximum of 32 files from one channel. • After you clip on record file, click Backup button you can save it. • For one device, if there is a backup in process, you cannot start a new backup operation.
12	Clip	• This is to edit the file. • Please play the file you want to edit and then click this button when you want to edit. You can see the corresponding slide bars in the time bar of the corresponding channel. You can adjust the slide bar or input the accurate time to set the file end time. • After you set, you can click Clip button again to edit the second period. You can see the slide bar restore its previous position. • Click Backup button after clip, you can save current contents in a new file. • You can clip for one channel or multiple-channel. The multiple-channel click operation is similar with the one-channel operation. **Please note:** ● **System max supports 1024 files backup at the same time.** ● **You cannot operate clip operation if there is any file has been checked in the file list.**
13	Record type	In any play mode, the time bar will change once you modify the search type.
Other Functions		
14	Smart search	• When system is playing, you can select a zone in the window to begin smart search. Click the motion detect button to begin play. • Once the motion detect play has begun, click button again will terminate current motion detect file play. • There is no motion detect zone by default. • If you select to play other file in the file list, system switches to motion detect play of other file. • During the motion detect play process, you cannot implement operations such as change time bar, begin backward playback or frame by frame playback. • Please refer to chapter 3.8.2.1 Smart Search for detailed operation.
15	Other channel sync switch for playback	When playing the file, click the number button, the system can switch to the same period of the corresponding channel to play.

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16	Digital zoom	When the system is in full-screen playback mode, left click the mouse in the screen. Drag your mouse in the screen to select a section and then left click mouse to initiate a digital zoom. You can right click mouse to exit.
17	Manually switch channel when playback	During the file playback process, you can switch to other channel via the dropdown list or rolling the mouse. This function is null if there is no record file or system is in smart search process.

3.8.2.1 Smart Search

During the multiple-channel playback mode, double click one channel and then click the button, system begins smart search. System supports 396 (22x18 PAL) and 330 (22x15 NTSC) zones. Please left click mouse to select smart search zones. See Figure 3-62.

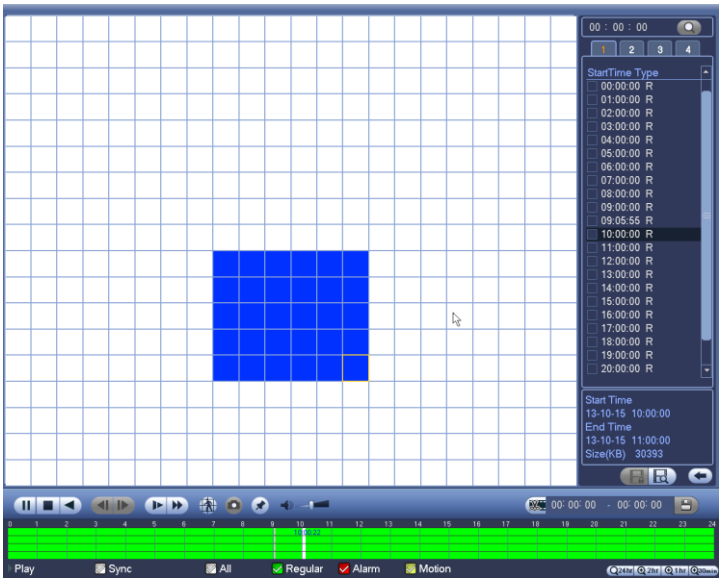

Figure 3-62

Click the , you can go to the smart search playback. Click it again, system stops smart search playback.

Important

- **System does not support motion detect zone setup during the full-screen mode.**
- **During the multiple-channel playback, system stops playback of rest channels if you implement one-channel smart search.**

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3.8.2.2 Accurate playback by time

Select records from one day, click the list, you can go to the file list interface. You can input time at the top right corner to search records by time. See image on the left side of the Figure 3-63 For example, input time 11:00.00 and then click Search button , you can view all the record files after 11:00.00 (The records includes current time.). See image on the right side of the Figure 3-63 Double click a file name to playback.

Note

- After you searched files, system implement accurate playback once you click Play for the first time.
- System does not support accurate playback for picture.
- System supports synchronization playback and non-synchronous playback. The synchronization playback supports all channels and non-synchronous playback only supports accurately playback of current select channel.

Figure 3-63

3.8.2.3 Mark Playback

Please make sure your purchased device support this function. You can use this function only if you can see the mark playback icon on the Search interface (Figure 3-61).

When you are playback record, you can mark the record when there is important information. After playback, you can use time or the mark key words to search corresponding record and then play. This is very easy for you to get the important video information.

- **Add Mark:** When system is playback, click Mark button , you can go to the following interface. See Figure 3-64.

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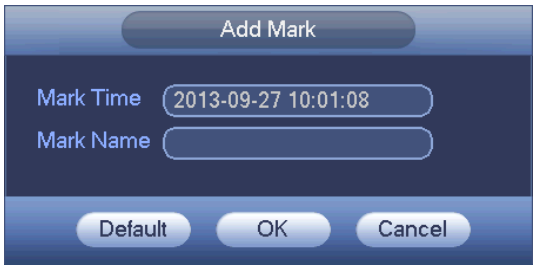

Figure 3-64

- **Playback Mark:** During 1-window playback mode, click mark file list button in Figure 3-61, you can go to mark file list interface. Double click one mark file, you can begin playback from the mark time.

- **Play before mark time:** Here you can set the it to begin playback from previous number of seconds of the mark time.

Note:
Usually, the system can playback previous N seconds record if there is such kind of record file. Otherwise, system playbacks from the previous X seconds when there is such as kind of record.

- **Mark Manager:** Click the mark manager button on the Search interface (Figure 3-61); you can go to Mark Manager interface. See Figure 3-65. System can manage all the record mark information of current channel by default. You can view all mark information of current channel by time.

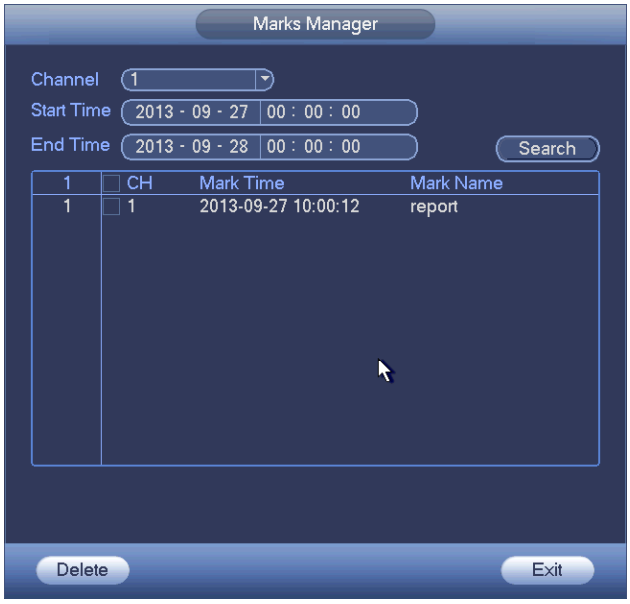

Figure 3-65

- **Modify:** Double click one mark information item, you can see system pops up a dialogue box for you to change mark information. You can only change mark name here.

- **Delete:** Here you can check the mark information item you want to delete and then click Delete button, you can remove one mark item. .

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Notes:

- After you go to the mark management interface, system needs to pause the current playback. System resumes playback after you exit mark management interface.
- If the mark file you want to playback has been removed, system begins playback from the first file in the list.

3.8.3 Picture Playback

a) From **Main menu->Search**, or on the preview interface right click mouse, you can go to Figure 3-61.
b) At the top right pane, you can check the box to select picture and then select playback interval.
c) Please refer to chapter 3.8.2 to select picture you want to view.

3.9 Backup

3.9.1 File Backup

In this interface, you can back up the recorded file to the USB device.

a) Connect the USB burner, USB device or portable HDD, etc.. to the device.
b) From **Main menu->Backup**, you can go to the Backup interface. See Figure 3-66

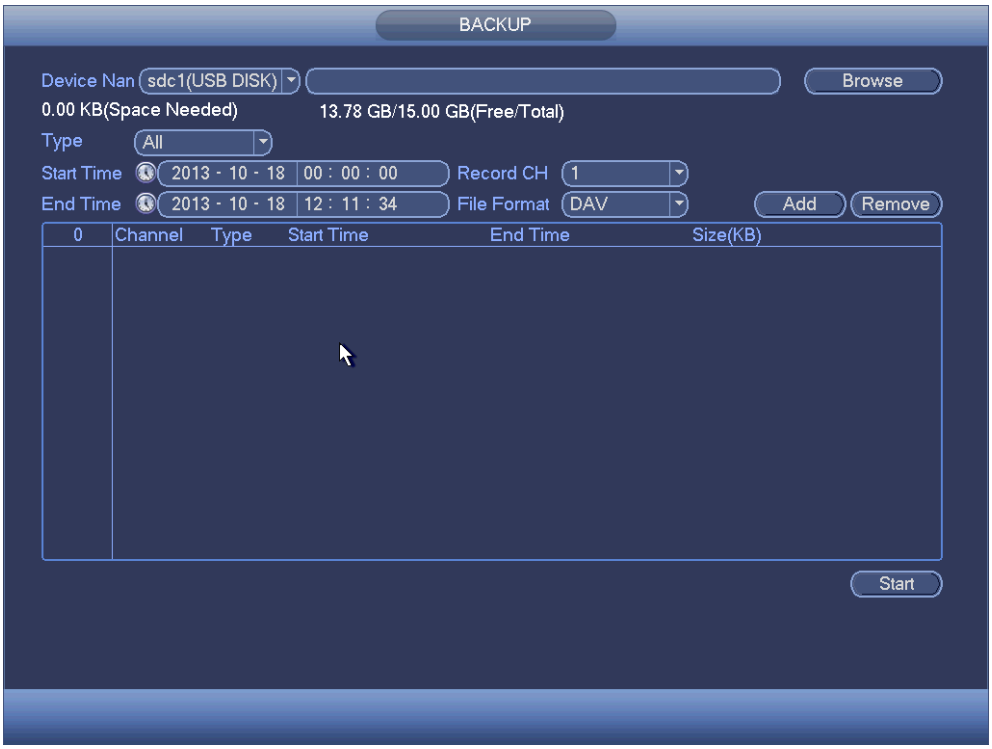

Figure 3-66

c) Select backup device and then set channel, file start time and end time.
d) Click add button, system begins the search. All matched files are listed below. System automatically calculates the capacity needed and remained. See Figure 3-67.

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e) System only backup files with a √ before channel name. You can use **Fn** or cancel button to delete √ after file serial number.

f) Click backup button, you can backup selected files. There is a process bar for your reference.

g) When the system completes backup, you will see a dialogue box prompting successful backup.

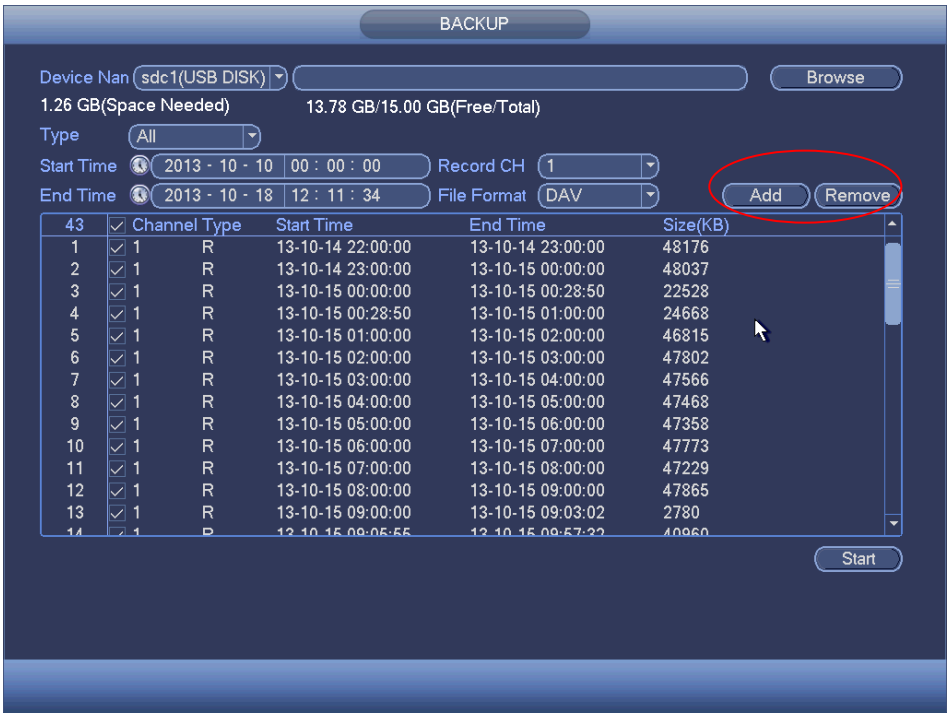

Figure 3-67

h) Click backup button, system begins burning. At the same time, the backup button becomes stop button. You can view the remaining time and process bar at the left bottom.

Note

- During backup process, you can click ESC to exit current interface for other operation (For some series product only). The system will not terminate backup process.
- The file name format usually is: **Channel number + Record type + Time**. In the file name, the YDM format is **Y+M+D+H+M+S**. File extension name is **.dav**.

3.9.2 Import/Export

This function allows you to copy current system configuration to other devices. It also supports import, create new folder, and delete folder etc. function.

From **Main menu->Setting->System->Import/Export**, you can see the configuration file backup interface is shown below. See Figure 3-68.

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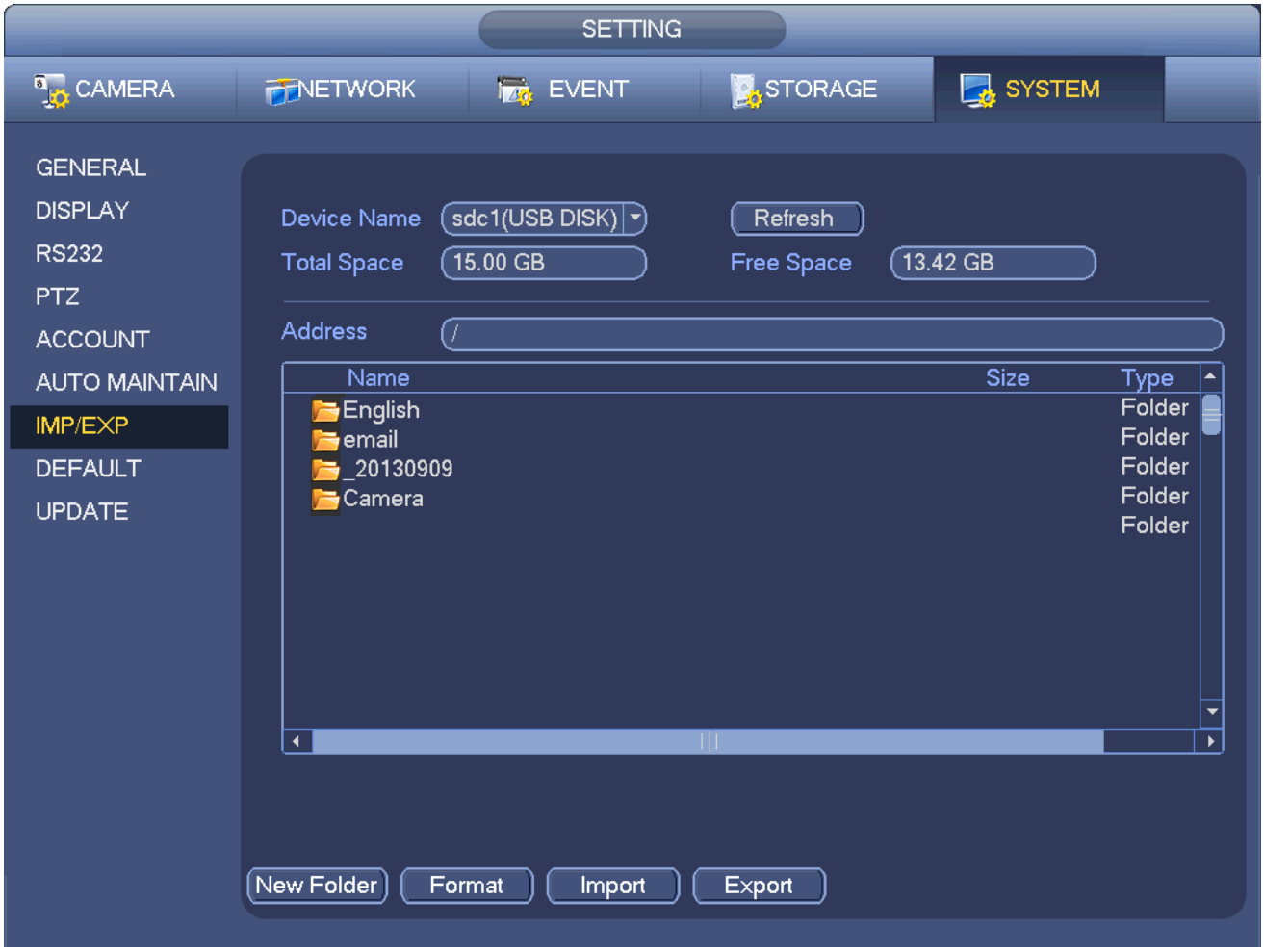

Figure 3-68

- **Export**: Please connect the peripheral device first and then go to the following interface. Click Export button, you will see there is a corresponding "**Config_Time**" folder. Double click the folder, you can view some backup files.
- **Import**: Here you can import the configuration files from the peripheral device to the current device. You need to select a folder first. You can see a dialogue box asking you to select a folder if you are selecting a file. System pops up a dialogue box if there is no configuration file under current folder. After the successful import, the system needs to reboot to activate new setup.
- **Format:** Click Format button, system pops up a dialogue box for you to confirm current operation. System begins format process after you click the OK button.

Notes:

- System cannot open config backup interface again if there is backup operation in the process.
- System refreshes device when you go to the config backup every time and set current directory as the root directory of the peripheral device.
- If you go to the configuration backup interface first and then insert the peripheral device, please click Refresh button to see the newly added device.

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3.9.3 Backup Log

a) From **Main menu->Info->Log**, the interface is shown below. See Figure 3-69.

Figure 3-69

b) Select log type and then set start time/end time, click Search button, you can see log time and event information. Click to view detailed log information.

c) Select log items you want to save and then click backup button, you can select a folder to save them. Click Start to backup and you can see the corresponding dialogue box after the process is finish.

3.9.4 USB Device Auto Pop-up

After you inserted the USB device, system can auto detect it and pop up the following dialogue box. It allows you to conveniently backup file, log, configuration or update system. See Figure 3-70. Please refer to chapter 3.9.1 file backup, chapter 3.9.3 backup log, chapter 3.9.2 import/export, and chapter 3.8.2 search for detailed information.

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Figure 3-70

3.10 Alarm

3.10.1 Detect Alarm

In the main menu, from Setting to Detect, you can see motion detect interface. See Figure 3-71.There are three detection types: motion detection, video loss, tampering.

3.10.2 Motion Detect

After analysis video, system can generate a motion detect alarm when the detected moving signal reached the sensitivity you set here.

Detection menu is shown below. See Figure 3-71.

1. **Event type**: From the dropdown list you can select motion detection type.
2. **Channel**: Select a channel from the dropdown list to set motion detect function.
3. **Enable**: Check the box here to enable motion detect function.
4. **Region**: Click select button, the interface is shown in Figure 3-72. Here you can set the motion detection zone. There are four zones for you to set. Please select a zone first and then left drag the mouse to select a zone. The corresponding color zone displays different detection zone. You can click **Fn** button to switch between the arm mode and disarm mode. In arm mode, you can click the direction buttons to move the green rectangle to set the motion detection zone. After you completed the setup, please click ENTER button to exit current setup. Do remember to click the save button to save current setup. If you click ESC button to exit the region setup interface system will not save your zone setup.
5. **Sensitivity**: System supports 6 levels. The sixth level has the highest sensitivity.
6. **Anti-dither**: Here you can set the anti-dither time. The value ranges from 5 to 600 seconds. The anti-dither time refers to the alarm signal lasts time. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if

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system detects the local alarm again. The screen prompt, alarm upload, email , etc. will not be activated. For example, if you set the anti-dither time as 10 second, you can see the each activation may last 10s if the local alarm is activated. During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10 seconds while the screen prompt, alarm upload, email will not be activated again. After 10 seconds, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.

7. **Period**: Click the set button, you will see an interface is shown in Figure 3-74. Here you can set the motion detect period. System only enables motion detect operation in the specified periods. This is not for video loss or the tampering. There are two ways for you to set periods. Please note system only supports 6 periods in one day.

   In Figure 3-74, Select icon of several dates, all checked items can be edited together.

   Now the icon is shown . Click to delete a record type from one period.

   In Figure 3-74. Click button after one date or a holiday, you can see an interface shown in Figure 3-75. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.
8. **Alarm output**: when an alarm occurs, system enables peripheral alarm devices.
9. **Latch:** when motion detection complete, system auto delays detecting for a specified time. The value ranges from 1-300(Unit: second)
10. **Show message**: System can pop up a message to alarm you in the local host screen if you enabled this function.
11. **Alarm upload**: System can upload the alarm signal to the network (including alarm centre) if you enabled current function.
12. **Send email**: System can send out email to alert you when an alarm occurs.
13. **Record channel**: System auto activates motion detection channel(s) to record once an alarm occurs. Please make sure you have set MD record in Schedule interface(Main Menu->Setting->Schedule) and schedule record in manual record interface(Main Menu->Advanced->Manual Record)
14. **PTZ activation**: Here you can set the PTZ movement when an alarm occurs. Such as go to preset, tour &pattern when there is an alarm. Click “select” button, you can see an interface is shown in Figure 3-73.
15. **Record Delay**: System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
16. **Tour:** Here you can enable tour function when alarm occurs. System one-window tour.
17. **Snapshot:** You can enable this function to snapshoot image when a motion detect alarm occurs.
18. **Video matrix:** Check the box here to enable this function. When an alarm occurs, SPOT OUT port displays device video output. It displays video (1-window tour) from alarm activation channel you select at the Record channel item.
19. **Buzzer:** Highlight the icon to enable this function. The buzzer beeps when alarm occurs.

    Please highlight icon to select the corresponding function. After all the setups please click save button, system goes back to the previous menu.

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Note:
In motion detection mode, you cannot use copy/paste to set channel setup since the video in each channel may not be the same.

In Figure 3-72, you can left click mouse and then drag it to set a region for motion detection. Click Fn to switch between arm/withdraw motion detection. After setting, click enter button to exit.

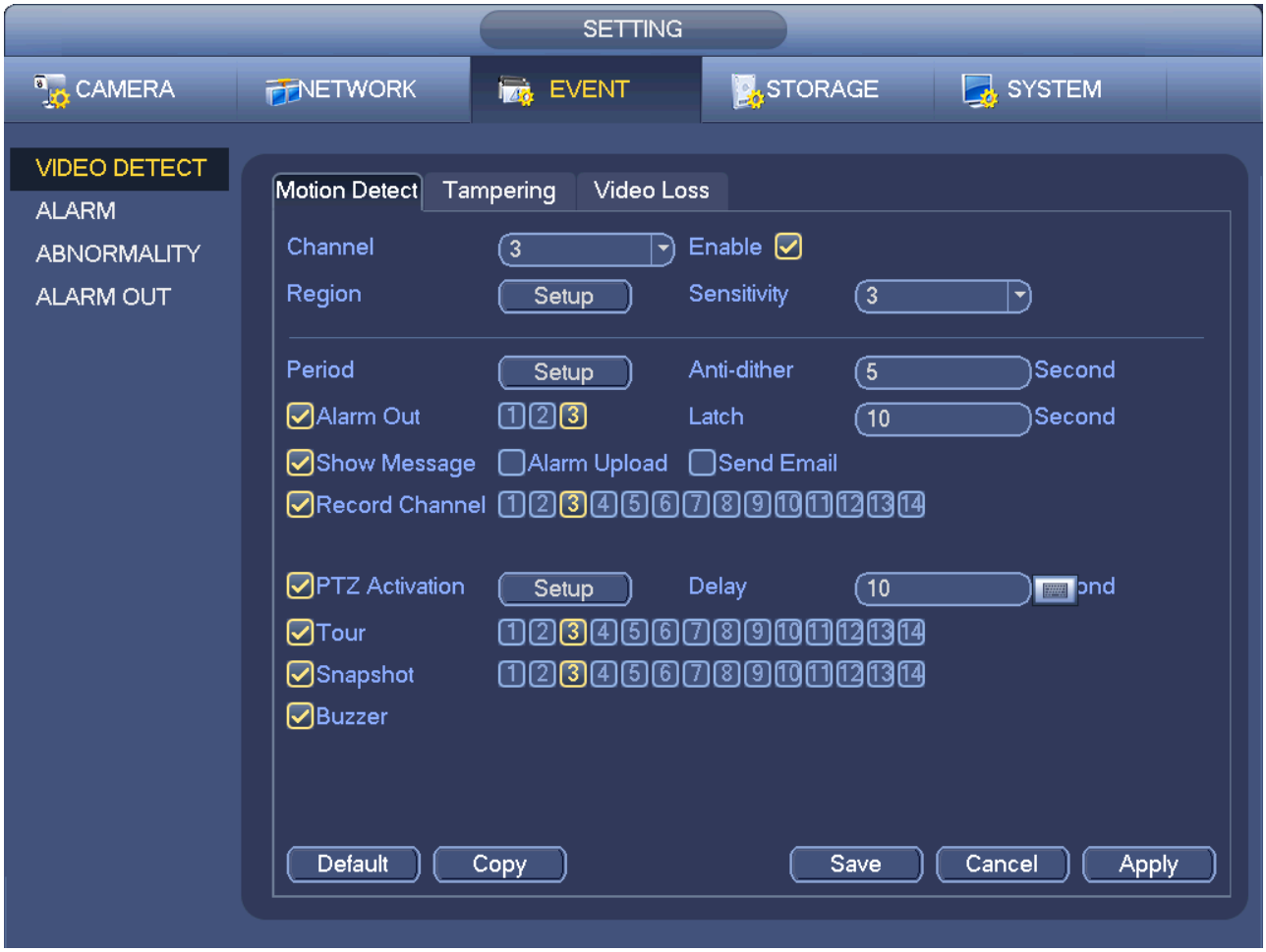

Figure 3-71

Figure 3-72

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Figure 3-73

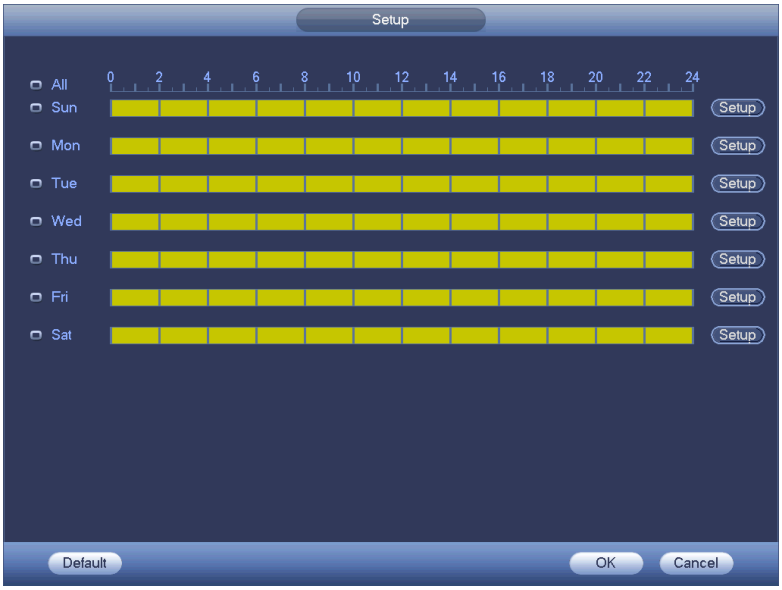

Figure 3-74

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Time Period
Current Date: Sun
Period 1 00 :00 - 24 : 00
Period 2 00 :00 - 24 : 00
Period 3 00 :00 - 24 : 00
Period 4 00 :00 - 24 : 00
Period 5 00 :00 - 24 : 00
Period 6 00 :00 - 24 : 00
Copy
All Sun Mon Tue Wed Thu Fri Sat
Save

Figure 3-75

Motion detect here only has relationship with the sensitivity and region setup. It has no relationship with other setups.

3.10.2.1 Tampering

When someone masks the camera lens for undesirable intentions, or the output video is in one-color due to the environments light change, the system can alert you to guarantee video continuity. Tampering interface is shown in Figure 3-76. You can enable “Alarm output “or “Show message” function when tampering alarm occurs.

- **Sensitivity**: The value ranges from 1 to 6. It mainly concerns the brightness. The level 6 has the higher sensitivity than level 1. The default setup is 3.

Tips:
You can enable preset/tour/pattern activation operation when video loss occurs.

Please refer to chapter 3.10.2 motion detection for detailed information.

Notes:
- In Detect interface, copy/paste function is only valid for the same type, which means you cannot copy a channel setup in video loss mode to tampering mode.
- Default function: Since detection channel and detection type may not be the same, system can only restore default setup of current detect type. For example, if you click Default button at the tampering interface, you can only restore default tampering setup. This is null for other detect types.
- System only enables tampering function during the period you set here. This is null for motion detect or video loss type.

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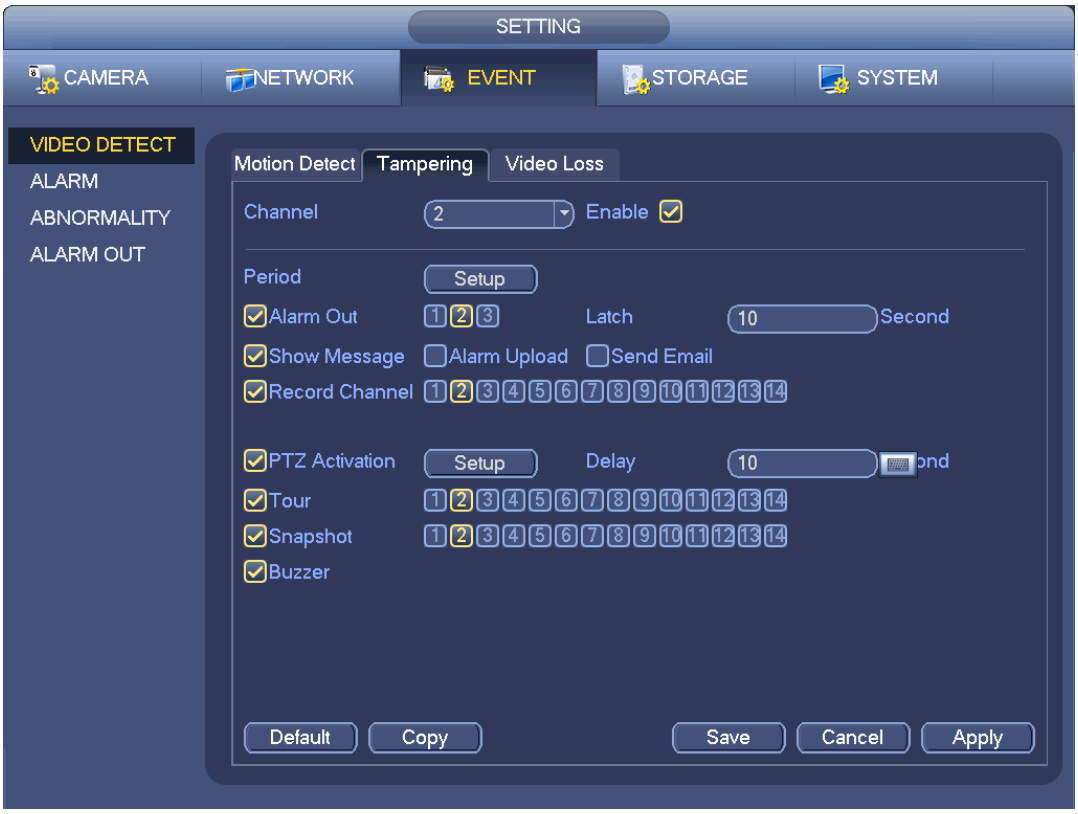

Figure 3-76

3.10.2.2 Video Loss

In Figure 3-71, select video loss from the type list. You can see the interface is shown in Figure 3-77. This function allows you to be informed when video loss phenomenon occurred.

You can enable alarm output channel and then enable show message function.

You can refer to chapter **3.10.2 Motion detect** for detailed information.

Tip:
You can enable preset/tour/pattern activation operation when video loss occurs.

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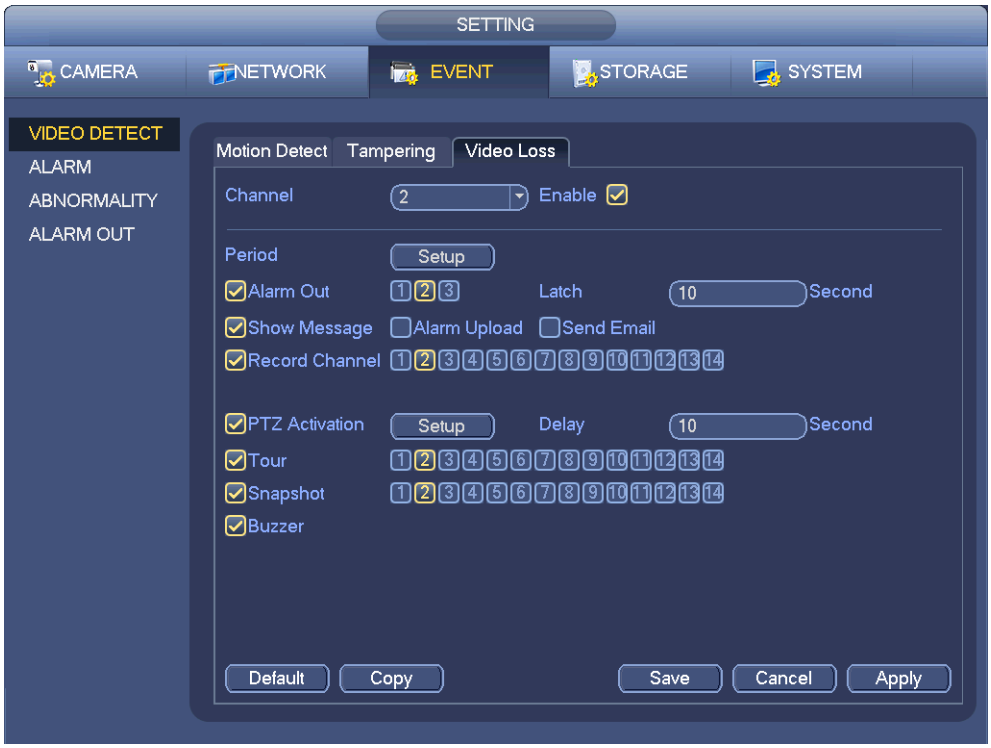

Figure 3-77

3.10.3 Alarm output

From **Main menu->Setting->Event->Alarm output**, you can see an interface shown in Figure 3-78. This is for you to set a proper alarm output (Auto/manual/stop). Click OK button for the alarm to reset, it will clear all alarm output statuses.

Figure 3-78

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Please highlight icon to select the corresponding alarm output.
After all the setups please click OK button, system goes back to the previous menu.

3.10.4 Alarm Setup

In the main menu, from Setting->Event->Alarm, you can see alarm setup interface.

1. **Alarm in**: This is for you to select channel number. In the main menu, from **Setting->Event->Alarm**, you can see alarm setup interface. See Figure 3-79. There are four alarm types. See Figure 3-79 to Figure 3-82.
2. **Local alarm:** The alarm signal system detects from the alarm input port.
3. **Network alarm:** This is the alarm signal from the network.
4. **IPC external alarm:** This is the on-off alarm signal from the front-end device and can activate the local HNVR.
5. **IPC offline alarm:** Once you select this item, system can generate an alarm when the front-end IPC disconnects with the local HNVR. The alarm can activate record, PTZ, snap , etc.. The alarm can last until the IPC and the HNVR connection resumes.

Important

- **If this is your first time to booting up the device, the disconnection status of the front-end network camera will not be regarded as offline. After one successful connection, all the disconnection events will be regarded as an IPC offline event.**
- **When an IPC offline alarm occurs, the record and snapshot function of digital channel is null.**

6. **Enable:** You need to highlight this button to enable current function.
7. **Type:** Normal open or normal close.
8. **Period:** Click set button, you can see an interface is shown in Figure 3-84. There are two ways for you to set periods. There are max 6 periods in one day. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.
    a. In Figure 3-84, Select icon of several dates, all checked items can be edited together. Now the icon is shown . Click to delete a record type from one period.
    b. In Figure 3-84. Click button after one date or a holiday, you can see an interface shown in Figure 3-85. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.
9. **PTZ activation**: When an alarm occurred, system can activate the PTZ operation. The PTZ activation lasts an anti-dither period. See Figure 3-83.
10. **Anti-dither:** Here you can set the anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to the alarm signal lasts time. The alarm signal activation will include the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here

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does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email , etc. will not be activated. For example, if you set the anti-dither time as 10 seconds, you will see the each activation may last 10 seconds if the local alarm is activated. During the process, if the system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10seconds while the screen prompt, alarm upload, email will not be activated again. After 10seconds, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.

11. **Latch:** When the anti-dither time has ended, the channel alarm you select in the alarm output may last a specified period. The value ranges from 1 to 300 seconds. This function is not for other alarm activation operations. The latch is still valid even you disable the alarm event function directly.
12. **Show message:** The system can pop up a message to alarm you in the local host screen if you have enabled this function.
13. **Alarm upload:** System can upload the alarm signal to the network (including alarm centre and the WEB) if you have enabled the current function. System only uploads the alarm channel status. You can go to the WEB and then go to the Alarm interface to set alarm event and alarm operation. Please go to the Network interface to set alarm centre information.
14. **Send email:** System can send out the alarm signal via the email to alert you when alarm occurs. Once you enable the snap function, system can also send out an image as the attachment. Please go to the **Main Menu->Setting ->Network->Email** interface to set.
15. **Record channel**: you can select proper channel to record alarm video (Multiple choices).
    a. You need to set alarm record mode as Schedule in Record interface (**Main Menu->Advanced->Record**). Please note the manual record has the highest priority. System record all the time no matter there is an alarm or not if you select Manual mode.
    b. Now you can go to the Schedule interface (**Main Menu->Setting->Schedule**) to set the record type, corresponding channel number, week and date. You can select the record type: Regular/MD/Alarm/MD & Alarm. Please note, you cannot select the MD & Alarm and MD (or Alarm) at the same time.
    c. Now you can go to the Encode interface to select the alarm record and set the encode parameter (**Main Menu->Setting->Encode**).
    d. Finally, you can set the alarm input as the local alarm and then select the record channel. The select channel begins alarm record when an alarm occurred. Please note system begins the alarm record instead of the MD record if the local alarm and MD event occurred at the same time.
16. Tour: Here you can enable tour function when an alarm occurs. System supports 1/8-window tour. Please go to chapter3.5.4.2 Display for tour interval setup. Please note the tour setup here has higher priority than the tour setup you set in the Display interface. Once both the two tours are both enabled, system can enable the alarm tour as you set here when an alarm occurred. If there is no alarm, system implements the tour setup in the display interface.
17. Snapshot: You can enable this function to snapshoot image when an alarm occurs.
18. Buzzer: Highlight the icon to enable this function. The buzzer beeps when an alarm occurs.

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Figure 3-79

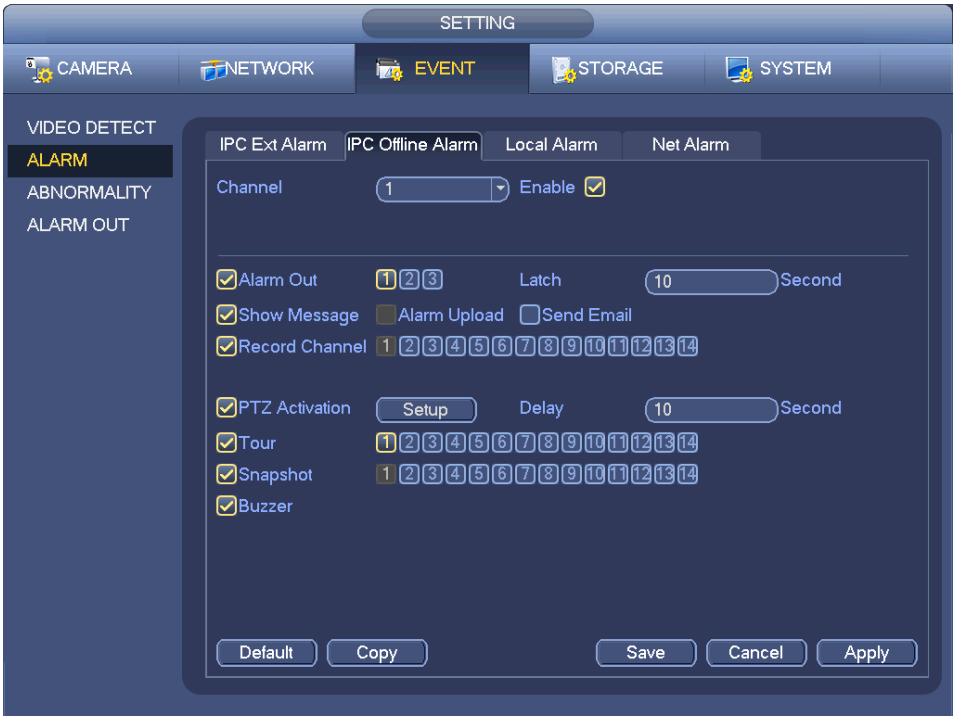

Figure 3-80

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Figure 3-81

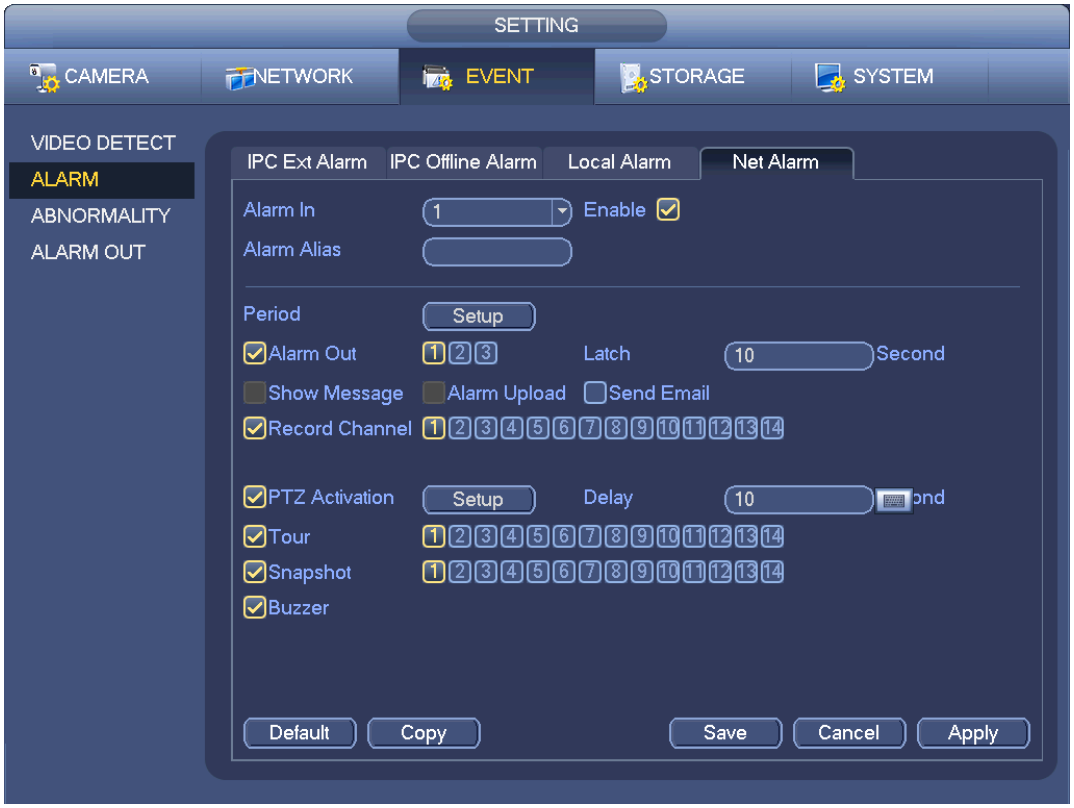

Figure 3-82

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Figure 3-83

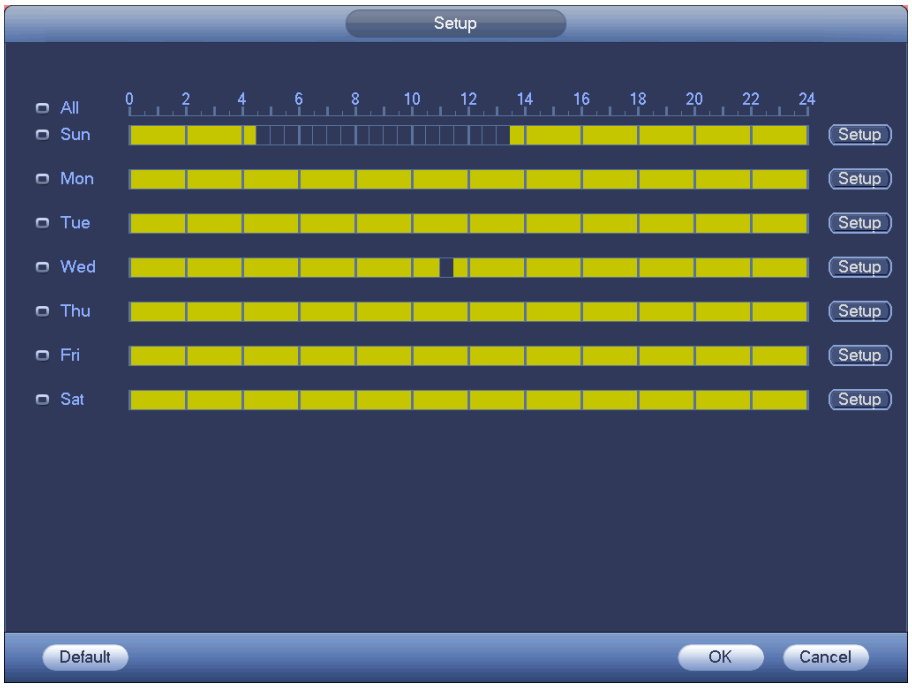

Figure 3-84

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Time Period
Current Date: Sun
Period 1 00 : 00 - 24 : 00
Period 2 00 : 00 - 24 : 00
Period 3 00 : 00 - 24 : 00
Period 4 00 : 00 - 24 : 00
Period 5 00 : 00 - 24 : 00
Period 6 00 : 00 - 24 : 00
Copy
All Sun Mon Tue Wed Thu Fri Sat
Save

Figure 3-85

Please highlight icon to select the corresponding function. After setting all the setups please click save button, system goes back to the previous menu.

3.10.5 Abnormality

There are two types: Disk/Network:

1. **Disk:** Disk error, no disk, no space. See Figure 3-86 and Figure 3-87.
2. **Network:** Disconnection, IP conflict, MAC conflict. See Figure 3-88.

- **Less than**: System can alert you when the HDD space is less than the threshold you set here (For HDD no space type only).
- **Latch:** Here you can set the corresponding delaying time. The value ranges from 1s-300s. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- **Show message**: system can pop up a message in the local screen to alert you when an alarm has occurred.
- **Alarm upload**: System can upload the alarm signal to the network (including alarm centre) if you enabled current function. For disconnection event, IP conflict event and MAC conflict event, this function is null.
- **Send email:** System can send out email to alert you when alarm occurs.
- **Buzzer:** Highlight the icon to enable this function. The buzzer beeps when an alarm occurs.

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Figure 3-86

Figure 3-87

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Figure 3-88

3.11 Network

3.11.1 Basic Setup

The single network adapter interface is shown in Figure 3-89 and the dual network adapters interface is shown in Figure 3-90.

- **Network Mode**: Includes multiple access, fault tolerance, and load balancing

  - ✧ Multiple-address mode: eth0 and eth1 operate separately. You can use the services such as HTTP, RTP service via etho0 or the eth1. Usually you need to set one default card (default setup is etho) to request the auto network service form the device-end such as DHCP, email, FTP , etc.. In multiple-address mode, system network status is shown offline once one card is offline.
  - ✧ Network fault-tolerance: In this mode, device uses bond0 to communicate with the external devices. You can focus on one host IP address. At the same time, you need to set one master card. Usually there is only one running card (master card).System can enable alternate card when the master card is malfunction. The system is shown offline once these two cards are both offline. Please note these two cards shall be in the same LAN.
  - ✧ Load balance: In this mode, device uses bond0 to communicate with the external device. The eth0 and eth1 are both working now and bearing the network load. Their network load are general the same. The system is shown offline once these two cards are both offline. Please note these two cards shall be in the same LAN.

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- **Default Network Card**: Please select eth0/eth1/bond0(optional) after enable multiple-access function
- **Main Network Card:** Please select eth0/eth1 (optional).after enable multiple access function.

Note: The dual-Ethernet port series support the above three configurations and supports functions as multiple-access, fault-tolerance and load balancing.

- **IP Version**: There are two options: IPv4 and IPv6. Right now, system supports these two IP address format and you can access via them.
- **MAC address**: The host in the LAN can get a unique MAC address. This is for you to access in the LAN. This is read-only.
- **IP address**: Here you can use up/down button (▲▼) or input the corresponding number to input IP address. Then you can set the the corresponding subnet mask the default gateway.
- **Default gateway**: Here you can input the default gateway. Please note system needs to check the validity of all IPv6 addresses. The IP address and the default gateway shall be in the same IP section. That is to say, the specified length of the subnet prefix shall have the same string.
- **DHCP**: This is to auto search IP. When enable DHCP function, you cannot modify IP/Subnet mask /Gateway. These values are from DHCP function. If you have not enabled DHCP function, IP/Subnet mask/Gateway display as zero. You need to disable DHCP function to view current IP information. Besides, when PPPoE is operating, you cannot modify IP/Subnet mask /Gateway.
- **MTU**: This is to set MTU value of the network adapter. The value ranges from 1280-7200 bytes. The default setup is 1500 bytes. Please note MTU modification may result in network adapter reboot and network becomes off. That is to say, MTU modification can affect current network service. System may pop up dialog box for you to confirm setup when you want to change MTU setup. Click OK button to confirm current reboot, or you can click Cancel button to terminate current modification. Before the modification, you can check the MTU of the gateway; the MTU of the NVR shall be the same as or is lower than the MTU of the gateway. In this way, you can reduce packets and enhance network transmission efficiency.

The following MTU value is for reference only:

- ✧ **1500:** Ethernet information packet max value and This is also the default value. This is the typical setup when there is no PPPoE or VPN. This is the default setup of some router, switch or the network adapter.
- ✧ **1492:** Recommend value for PPPoE.
- ✧ **1468:** Recommend value for DHCP.

- **Preferred DNS server:** DNS server IP address.
- **Alternate DNS server**: DNS server alternate address.
- **Transfer mode:** Here you can select the priority between fluency/video qualities.
- **LAN download:** System can process the downloaded data first if you enable this function. The download speed is 1.5X or 2.0X of the normal speed.
- **LAN download:** System can process the downloaded data first if you enable this function. The download speed is 1.5X or 2.0X of the normal speed.

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After completing all the setups please click save button, system goes back to the previous menu.

Figure 3-89

Figure 3-90

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3.11.1.1 Connection

The connection setup interface is shown in Figure 3-91.

- Max connection: system support maximal 128 users. 0 means there is no connection limit.
- TCP port: Default value is 37777.
- UDP port: Default value is 37778.
- HTTP port: Default value is 80.
- HTTPS port: Default value is 443.
- RTSP port: Default value is 554.

Important: System needs to reboot after you changed and saved any setup of the above four ports. Please make sure the port values here do not conflict.

Figure 3-91

3.11.1.2 WIFI

The WIFI interface is shown below. See Figure 3-92.

- **Enable**: Check the box here to enable WIFI function.
- **Refresh**: You can click it to search the hotspot list again. It can automatically add the information such as the password if you have set it before.
- **Disconnect**: Here you can click it to turn off the connection.
- **Connect**: Here you can click it to connect to the hotspot. System needs to turn off current connection and then connect to a new hotspot if there is connection of you selected one.

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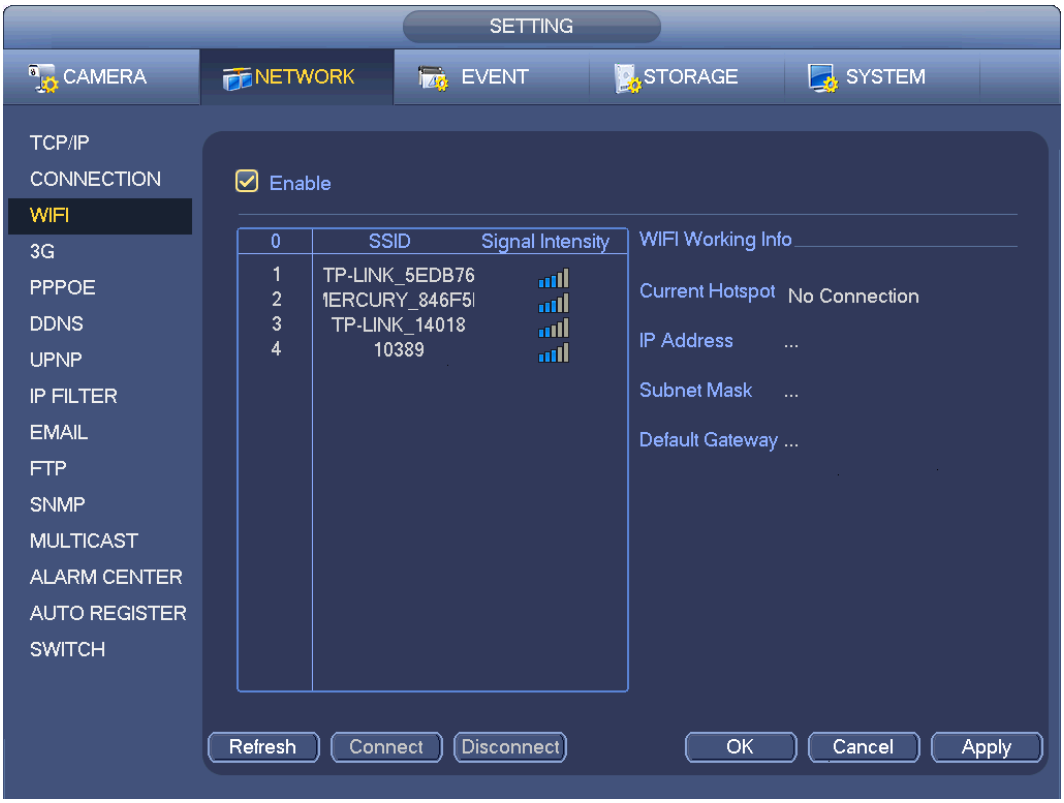

Figure 3-92

- WIFI working status: Here you can view current connection status.

Please note:

- After a successful connection, you will see WIFI connection icon at the top right corner of the preview interface.
- When the hotspot verification type is WEP, system displays as AUTO since the device cannot detect its encryption type.
- System does not support verification type WPA and WPA2. The display may become abnormal for the verification type and encryption type.

After device successfully connected to the WIFI, you can view the hotspot name, IP address, subnet mask, default gateway, etc. Right now the system support **TOTOLINK_N2200UP** module.

3.11.1.3 3G

3G setup interface is shown below. See Figure 3-93.

Please refer to the following contents for the parameter information.

- **Pane 1:** Display 3G signal intensity after you enabled 3G function.
- **Pane 2:** Display 3G module configuration information after you enabled 3G function.
- **Pane 3:** Display 3G module status information after you enabled 3G function.

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This is to display current wireless network signal intensity such as EVDO, CDMA1x, WCDMA, WCDMA, EDGE , etc.

- **3G module:** This is to display current wireless network adapter name.
- **3G Enable/Disable:** Check the box here to enable 3G module.
- **Network type:** There are various network types for different 3G network modules. You can select according to your requirements.
- **APN:** This is the wireless connection server. This is to set you access the wireless network via which method.
- **AUTH:** This is the authentication mode. It supports PAP/CHAP.
- **Dial number**: Please input 3G network dialup number you got from your ISP.
- **User name:** This is the user name for you to login the 3G network.
- **Password:** This is the password for you to login the 3G network.
- **Pulse interval:** You can set the dialup duration. Once you disable the extra stream, the connection time begins. For example, if you input 5 seconds here, then 3G network connection period is 5 seconds. The device automatically disconnect when time is up. If there is no extra stream, 3G network connection is valid all the time. **If the alive time is 0, then the 3G network connection is valid all the time.**
- **Dial:** Here you can enable or disable 3G network connection/disconnection manually.
- **3G wireless network:** Here is to display wireless network status, SIM card status, dial status. If the 3G connection is OK, then you can see the device IP address the wireless network automatically allocates.

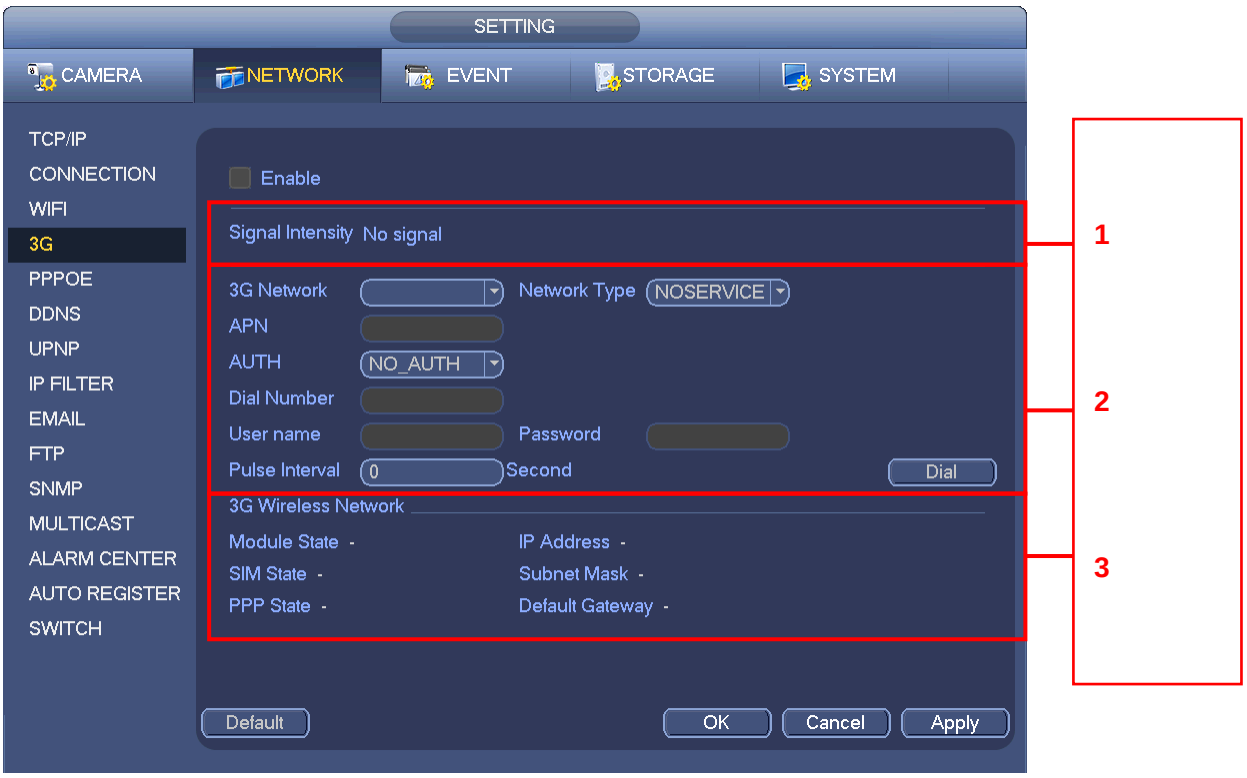

Figure 3-93

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3.11.1.4 PPPoE

PPPoE interface is shown in Figure 3-94.

Input “PPPoE name” and “PPPoE password” you get from your ISP (Internet service provider). Click save button, you need to restart to activate your configuration.

After rebooting, NVR will connect to internet automatically. The IP in the PPPoE is the NVR dynamic value. You can access this IP to visit the unit.

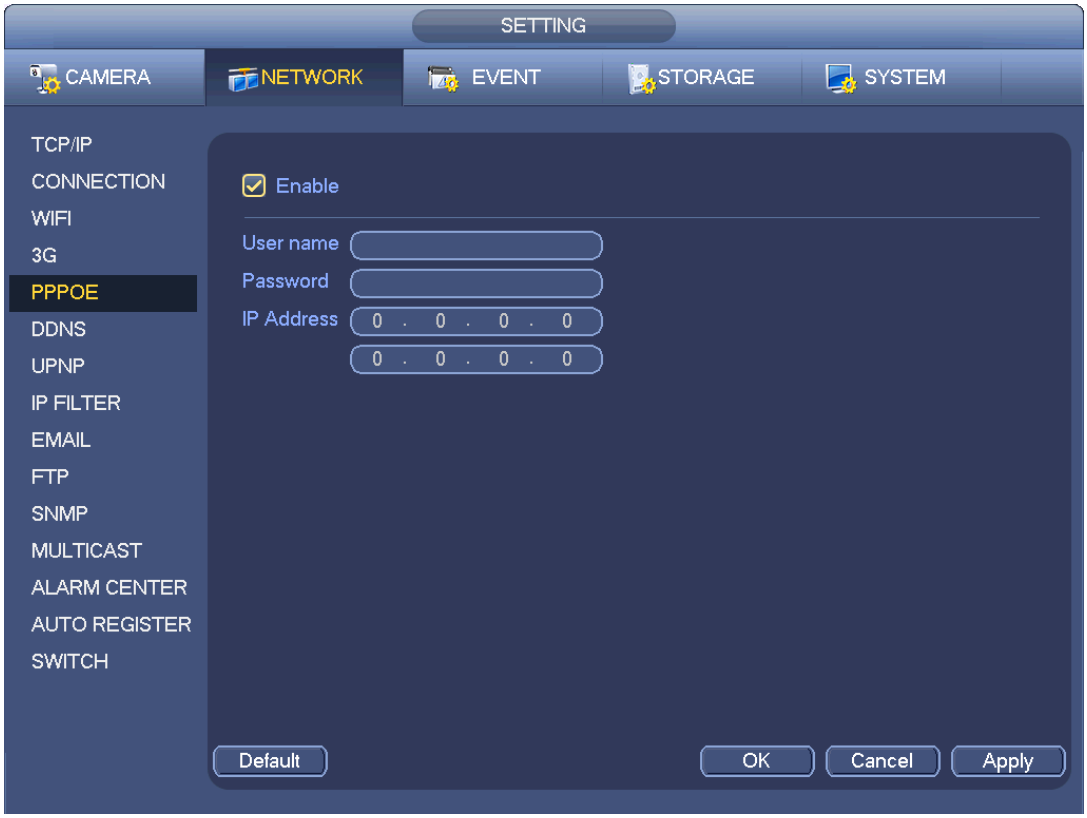

Figure 3-94

3.11.1.5 DDNS Setup

DDNS setup interface is shown in Figure 3-95.

You need a PC of fixed IP in the internet and there is the DDNS software running in this PC. In other words, this PC is a DNS (domain name server).

1. In network DDNS, please select DDNS type and highlight enable item. Then please input your PPPoE name you get from you IPS and server IP (PC with DDNS). Click save button and then reboot system.

2. Click save button, system prompts you to reboot to get all setup activated.

3. After rebooting, open Internet Explorer and input as below:

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http：//(DDNS server IP)/(virtual directory name)/webtest.htm

e.g.: **http：//10.6.2.85/NVR _DDNS/webtest.htm**

4. Now you can open DDNSServer web search page.

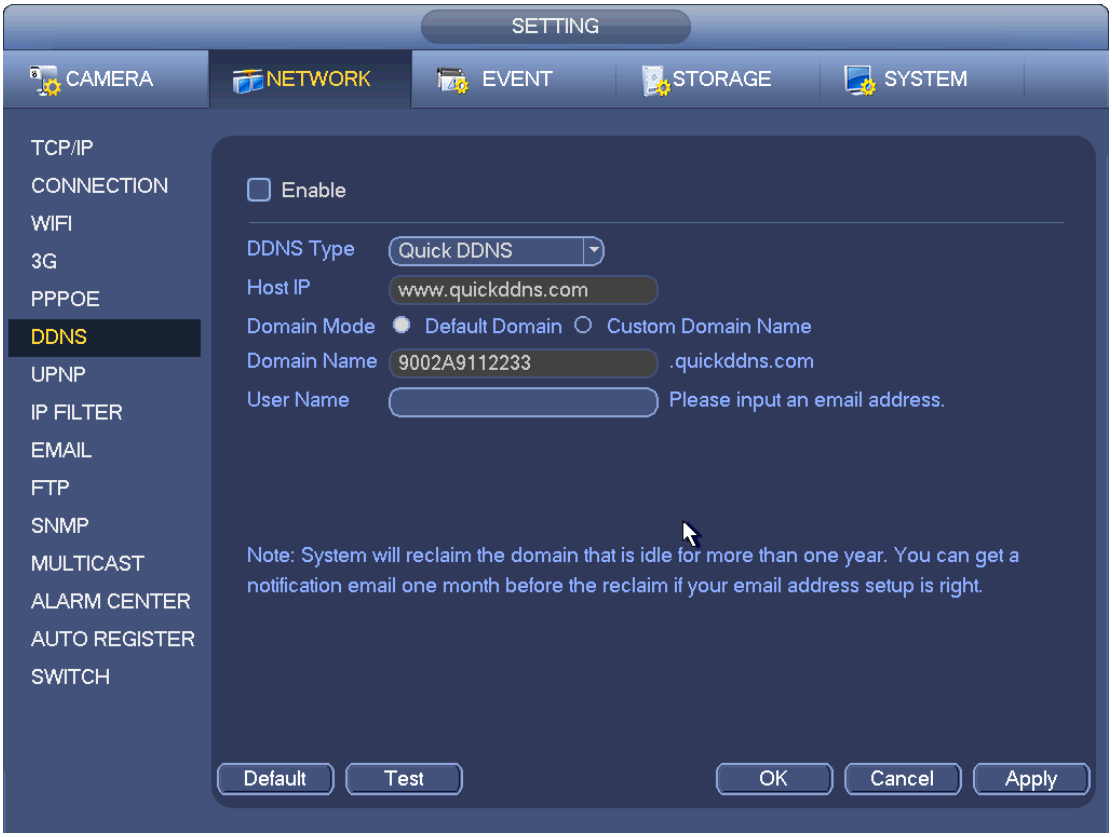

Figure 3-95

Please note NNDS type includes: CN99 DDNS, NO-IP DDNS, Quick DDNS, Dyndns DDNS and sysdns DDNS. All the DDNS can be valid at the same time, you can select as you require.

Private DDNS function shall work with special DDNS server and special Professional Surveillance Software (PSS).

Quick DDNS and Client-end Introduction

1) Background Introduction

Device IP is not fixed if you use ADSL to login the network. The DDNS function allows you to access the NVR via the registered domain name. Besides the general DDNS, the Quick DDNS works with the device from the manufacturer so that it can add the extension function.

2) Function Introduction

The quick DDNS client has the same function as other DDNS client end. It bonds the domain name and the IP address together. Right now, current DDNS server is for our own devices only. You need to refresh the bonding relationship of the domain and the IP regularly. There is no user name, password or the ID registration on the server. At the same time, each device has a default

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domain name (Generated by MAC address) for your option. You can also use customised valid domain name (has not registered.).

3) Operation

Before you use Quick DDNS, you need to enable this service and set proper server address, port value and domain name.

- Server address：**www.quickddns.com**
- Port number：**80**
- Domain name：There are two modes: Default domain name and customised domain name.

Instead of a default domain name registration, you can also use customised domain name (You can input your self-defined domain name.) After a successful registration, you can use domain name to login installed of the device IP.

- **User name:** This is optional. You can input your commonly used email address.

Important

- **Do not register frequently. The interval between two registrations shall be more than 60 seconds. Too many registration requests may result in a server attack.**
- **System may take back the domain name that is idle for one year. You can get a notification email before the cancel operation if your email address setup is OK.**

3.11.1.6 UPnP

The UPNP protocol is to establish a mapping relationship between the LAN and the WAN. Please input the router IP address in the LAN in Figure 3-89. See Figure 3-96.

- **UPNP on/off** ：Turn on or off the UPNP function of the device.
- **Status**: When the UPNP is offline, it shows as “Unknown”. When the UPNP works it shows “Success”
- **Router LAN IP**: This is the router IP in the LAN.
- **WAN IP**: This is the router IP in the WAN.
- **Port Mapping list**：The port mapping list here is the one to one relationship with the router’s port mapping setting.
- **List**：
  - ✧ **Service name**：Defined by user.
  - ✧ **Protocol**： Protocol type
  - ✧ **Internal port**：Port that has been mapped in the router.
  - ✧ **External port**：Port that has been mapped locally.
- **Default**: UPNP default port setting is the HTTP, TCP and UDP of the NVR.
- **Add to the list**: Click it to add the mapping relationship.
- **Delete**: Click it to remove one mapping item.

Double click one item; you can change the corresponding mapping information. See Figure 3-97.

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Important:

- **When you are setting the router external port, please use 1024~5000 port. Do not use well-known port 1~255 and the system port 256~1023 to avoid conflict.**
- **For the TCP and UDP, please make sure the internal port and external port are the same to guarantee the proper data transmission.**

Figure 3-96

Figure 3-97

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3.11.1.7 IP Filter

IP filter interface is shown in Figure 3-98. You can add IP in the following list. The list supports max 64 IP addresses. System supports valid address of IPv4 and IPv6.

Please note system needs to check the validity of all IPv6 addresses and implement optimization.

After you have enabled trusted sites function, only the IP listed below can access current NVR.
If you enable blocked sites function, the following listed IP addresses cannot access current NVR.

- **Enable:** Highlight the box here, you can check the trusted site function and blocked sites function. You cannot see these two modes if the Enable button is grey.
- **Type:** You can select trusted site and blacklist from the dropdown list. You can view the IP address on the following column.
- **Start address/end address:** Select one type from the dropdown list, you can input IP address in the start address and end address. Now you can click Add IP address or Add IP section to add.
  a) For the newly added IP address, this is in enable status by default. Remove the √ before the item, and then current item will not be in the list.
  b) System max supports 64 items.
  c) Address column supports IPv4 or IPv6 format. If This is IPv6 address, system can optimize it. For example, system can optimize aa:0000: 00: 00aa: 00aa: 00aa: 00aa: 00aa as aa:: aa: aa: aa: aa: aa: aa.
  d) System automatically removes space if there is any space before or after the newly added IP address.
  e) System only checks start address if you add IP address. System check start address and end address if you add IP section and the end address shall be larger than the start address.
  f) System may check newly added IP address exists or not. System does not add if input IP address does not exist.
- **Delete:** Click it to remove specified item.
- **Edit:** Click it to edit start address and end address. See Figure 3-99. System can check the IP address validity after the edit operation and implement IPv6 optimization.
- **Default:** Click it to restore default setup. In this case, the trusted sites and blocked sites are both null.

Note:

- If you enabled trusted sites, only the IP in the trusted sites list can access the device.
- If you enabled blocked sites, the IP in the blocked sites cannot access the device.
- System supports add MAC address.

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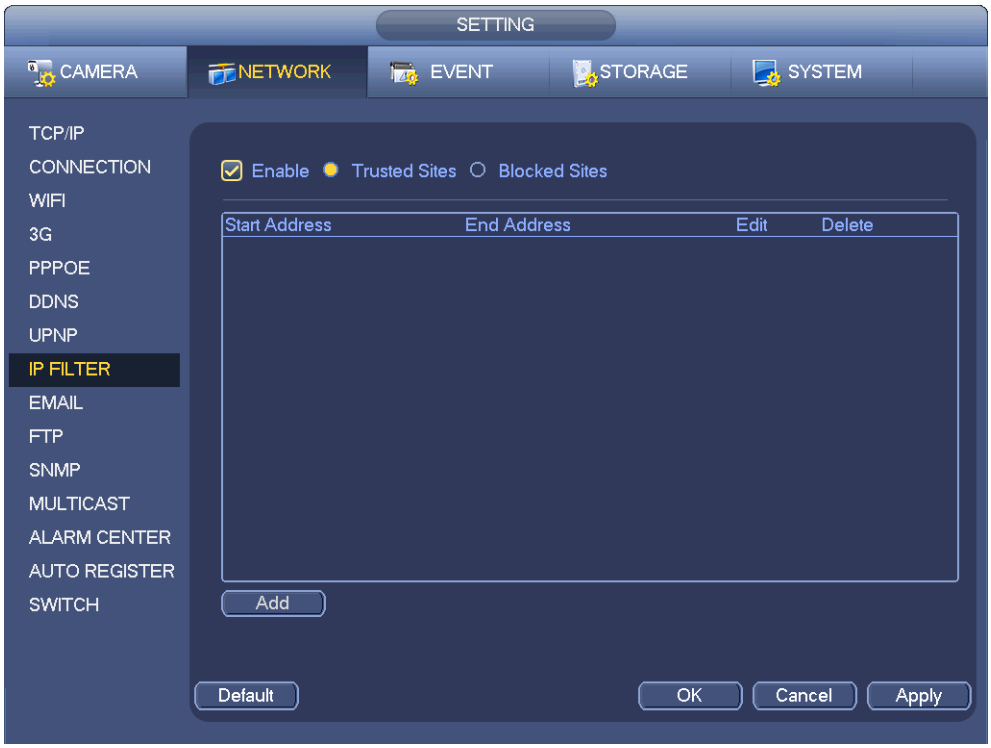

Figure 3-98

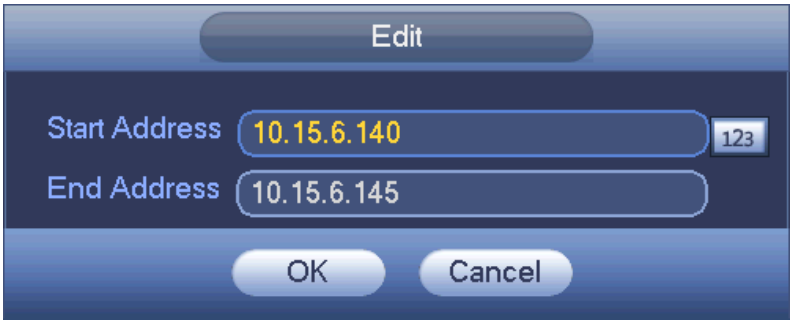

Figure 3-99

3.11.1.8 Email

The email interface is shown below. See Figure 3-100.

- **SMTP server**: Please input your email SMTP server IP here.
- **Port**: Please input corresponding port value here.
- **User name**: Please input the user name to login the sender email box.
- **Password**: Please input the corresponding password here.
- **Sender**: Please input sender email box here.
- **Title**: Please input email subject here. System support English character and Arabic number. Max 32-digit.
- **Receiver:** Please input receiver email address here. System max supports 3 email boxes. System automatically filters same addresses if you input one receiver repeatedly.
- **SSL enable**: System supports SSL encryption box.
- **Interval:** The send interval ranges from 0 to 3600 seconds. 0 means there is no interval.

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- **Health email enable**: Please check the box here to enable this function. This function allows the system to send out the test email to check the connection is OK or not.
- **Interval:** Please check the above box to enable this function and then set the corresponding interval. System can send out the email regularly as you set here. Click the Test button, you can see the corresponding dialogue box to see the email connection is OK or not.

Please note system will not send out the email immediately when the alarm occurs. When the alarm, motion detection or the abnormity event activates the email, the system sends out the email according to the interval you specified here. This function is very useful when there are too many emails activated by the abnormity events, which may result in heavy load for the email server.

Figure 3-100

3.11.1.9 FTP

You need to download or buy FTP service tool (such as Ser-U FTP SERVER) to establish FTP service.

Please install Ser-U FTP SERVER first. From "**start" -> "program" -> Serv-U FTP Server -> Serv-U Administator**. Now you can set the user password and FTP folder. Please note you need to grant write right to FTP upload user. See Figure 3-101.

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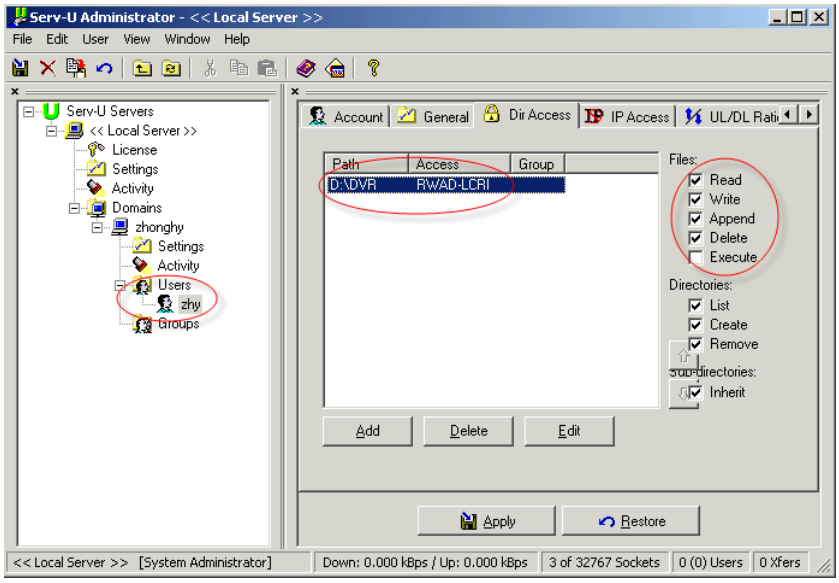

Figure 3-101

You can use a PC or FTP login tool to test setup is right or not.

For example, you can login user ZHY to FTP://10.10.7.7 and then test it can modify or delete folder or not. See Figure 3-102.

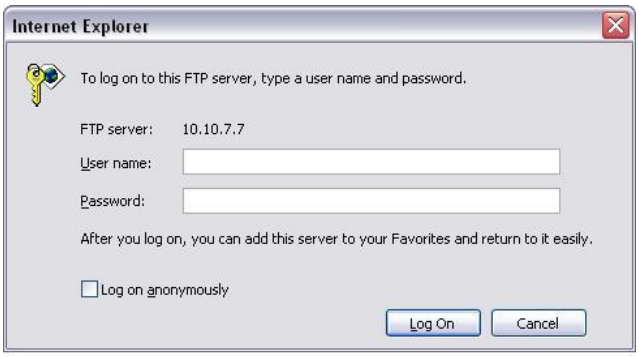
Internet Explorer
To log on to this FTP server, type a user name and password.
FTP server: 10.10.7.7
User name:
Password:
After you log on, you can add this server to your Favorites and return to it easily.
Log on anonymously
Log On
Cancel

Figure 3-102

System also supports upload multiple NVRs to one FTP server. You can create multiple folders under this FTP.

FTP interface is shown in Figure 3-103.

Please highlight the icon in front of Enable to activate FTP function.

Here you can input FTP server address, port and remote directory. When remote directory is null, system automatically create folders according to the IP, time and channel.

User name and password is the account information for you to login the FTP.

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File length is upload file length. When setup is larger than the actual file length, system will upload the whole file. When setup here is smaller than the actual file length, system only uploads the set length and auto ignore the left section. When interval value is 0, system uploads all corresponding files.

After completing the channel and weekday setup, you can set the two periods for one each channel.

Click the Test button, you can see the corresponding dialogue box to see the FTP connection is OK or not.

Figure 3-103

3.11.1.10 SNMP

SNMP is an abbreviation of Simple Network Management Protocol. It provides the basic network management frame of the network management system. The SNMP widely used in many environments. This is used in many network device, software and system.

You can set the in the following interface. See Figure 3-104.

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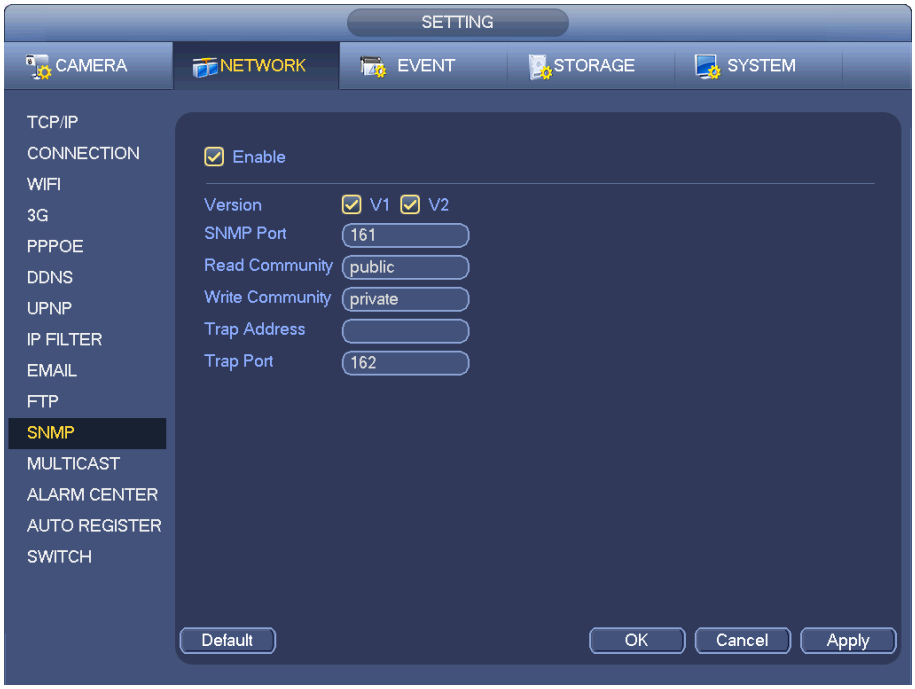

Figure 3-104

Please enable the SNMP function. Use the corresponding software tool (MIB Builder and MG-SOFT MIB Browser. You still need two MIB file: BASE-SNMP-MIB, NVR-SNMP-MIB) to connect to the device. You can get the device corresponding configuration information after successfully connecting.

Please follow the steps listed below to configure.

- In Figure 3-104, check the box to enable the SNMP function. Input the IP address of the PC than is running the software in the Trap address. You can use default setup for the rest items.
- Compile the above mentioned two MIB file via the software MIB Builder.
- Run MG-SOFT MIB Browser to load the file from the previous step to the software.
- Input the device IP you want to manage in the MG-SOFT MIB Browser. Please set the corresponding version for your future reference.
- Open the tree list on the MG-SOFT MIB Browser; you can get the device configuration. Here you can see the device has how many video channels, audio channels, application version , etc..

Note:
Port conflict occurs when SNMP port and Trap port are the same.

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3.11.1.11 Multicast

Multicast setup interface is shown in Figure 3-105.

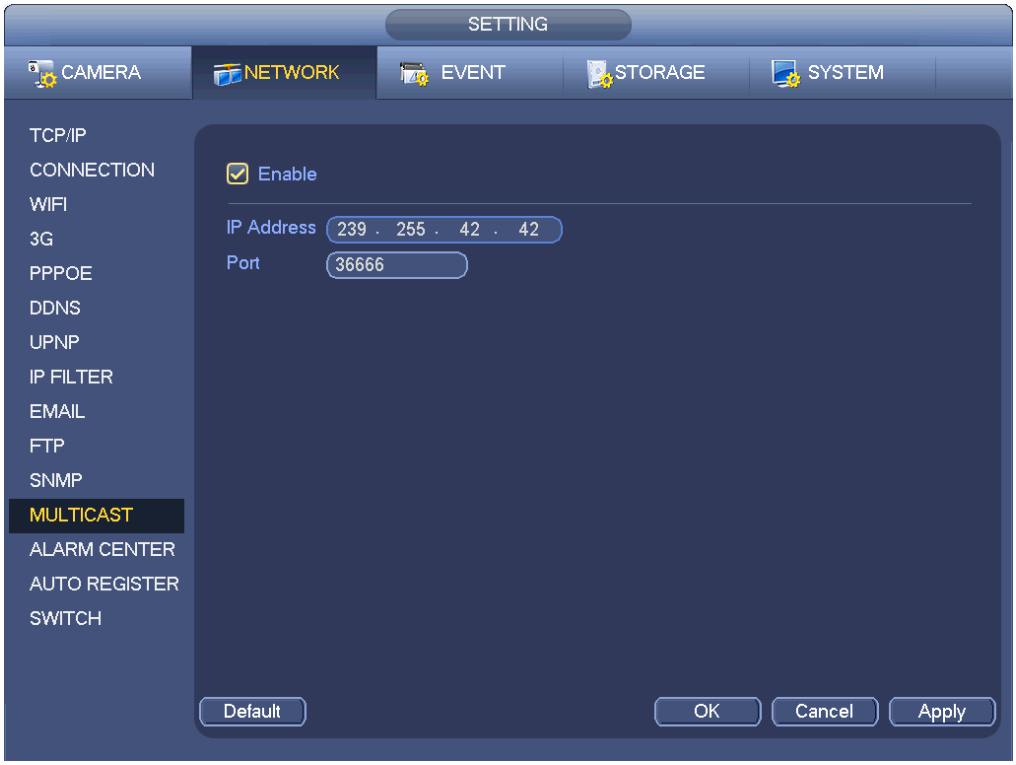

Figure 3-105

Here you can set a multiple cast group. Please refer to the following sheet for detailed information.

- IP multiple cast group address

-224.0.0.0-239.255.255.255

-“D” address space

  - The higher four-bit of the first byte=”1110”

- Reserved local multiple cast group address

-224.0.0.0-224.0.0.255

-TTL=1 When sending out telegraph

-For example

224.0.0.1 All systems in the sub-net

224.0.0.2 All routers in the sub-net

224.0.0.4 DVMRP router

224.0.0.5 OSPF router

224.0.0.13 PIMv2 router

- Administrative scoped addressees

-239.0.0.0-239.255.255.255

-Private address space

  - Like the single broadcast address of RFC1918
  - Cannot be used in Internet transmission
  - Used for multiple cast broadcast in limited space.

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Except the above mentioned addresses of special meaning, you can use other addresses. For example:
Multiple cast IP: 235.8.8.36
Multiple cast PORT: 3666.

After you logged in the Web, the Web can automatically get multiple cast address and add it to the multiple cast groups. You can enable real-time monitor function to view the view.

Please note multiple cast function applies to special series only.

3.11.1.12 Alarm Centre

This interface is reserved for you to develop. See Figure 3-106.

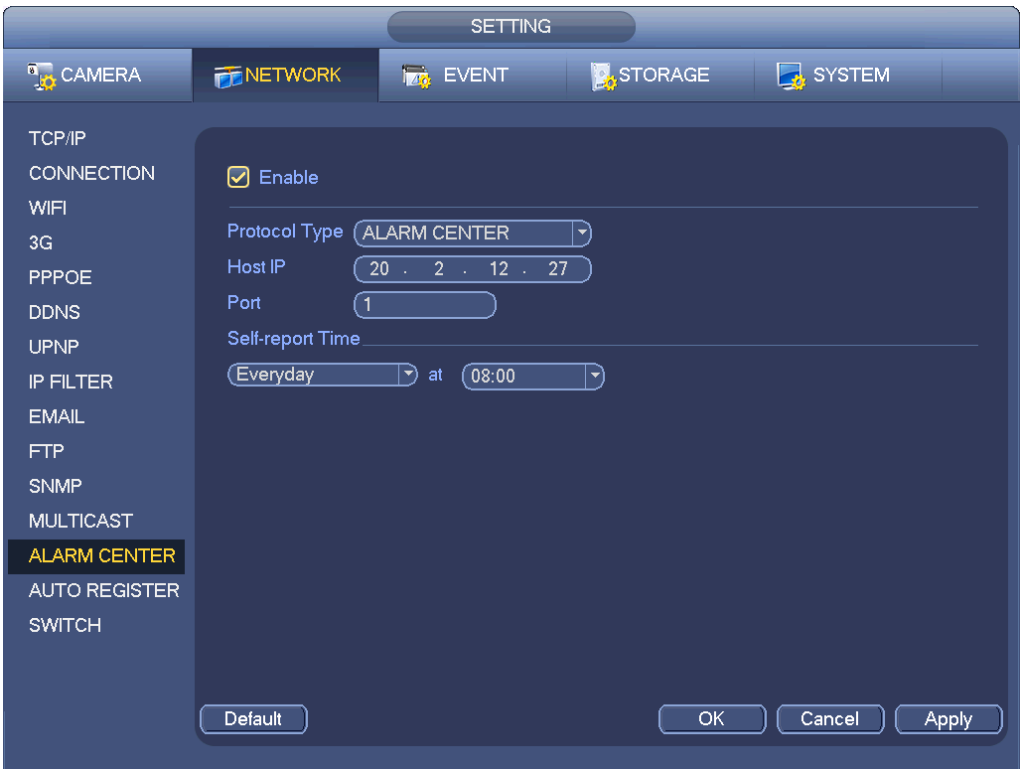

Figure 3-106

3.11.1.13 Auto register

This function allows the device to auto register to the proxy you specified. In this way, you can use the client-end to access the NVR via the proxy. Here the proxy has a switch function. In the network service, device supports the server address of IPv4 or domain.

Please follow the steps listed below to use this function.

Please set proxy server address, port, and sub-device name at the device-end. Please enable the auto register function, the device can auto register to the proxy server.

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The setup interface is shown in Figure 3-107.

Important

Do not input network default port such as TCP port number.

Figure 3-107

a) The proxy server software developed from the SDK. Please open the software and input the global setup. Please make sure the auto connection port here is the same as the port you set in the previous step.

b) Now you can add device. Please do not input default port number such as the TCP port in the mapping port number. The device ID here shall be the same with the ID you input in Figure 3-107. Click Add button to complete the setup.

c) Now you can boot up the proxy server. When you see the network status is Y, it means your registration is OK. You can view the proxy server when the device is online.

Important

The server IP address can also be domain. But you need to register a domain name before you run proxy device server.

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3.11.1.14 Switch

This is for you to set IP address, subnet mask, gateway , etc. of the Switch. See Figure 3-108.

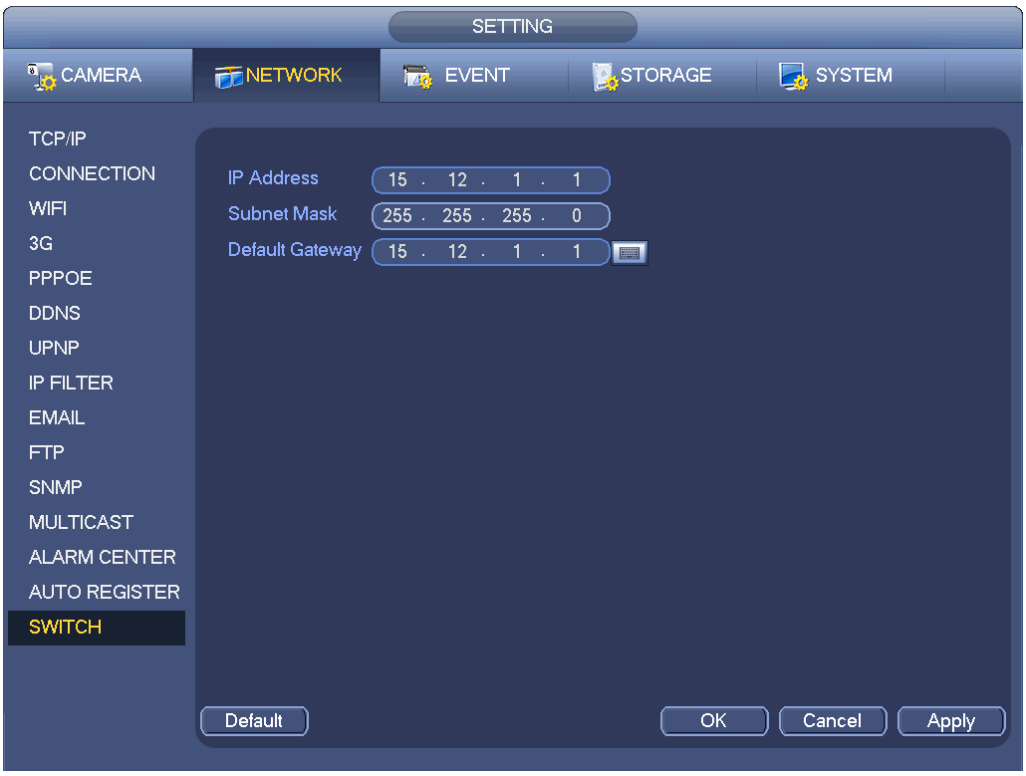

Figure 3-108

3.11.2 Network Test

In this interface, you can see network test and network load information.

3.11.2.1 Network Test

From **Main menu->Info-Network->Test**, the network test interface is shown in Figure 3-109.

- **Destination IP**: Please input valid IPV4 address and domain name.
- **Test**: Click it to test the connection with the destination IP address. The test results can display average delay and packet loss rate and you can also view the network status as OK, bad, no connection , etc.
- **Network Sniffer backup**: Please insert USB2.0 device and click the Refresh button, you can view the device on the following column. You can use the dropdown list to select peripheral device. Click Browse button to select the snap path. The steps here are same as preview backup operation.

You can view all connected network adapter names (including Ethernet, PPPoE, WIFI, and 3G), you can click the button on the right panel to begin Sniffer. Click the grey stop button to stop.

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Please note system cannot use Sniffer over several network adapters at the same time.

After the Sniffer begins, you can exit to implement corresponding network operation such as login WEB, monitor. Please go back to Sniffer interface to click stop Sniffer. System can save the packets to the specified path. The file is named after “Network adapter name+time”. You can use software such as Wireshark to open the packets on the PC for the professional engineer to solve complicated problems.

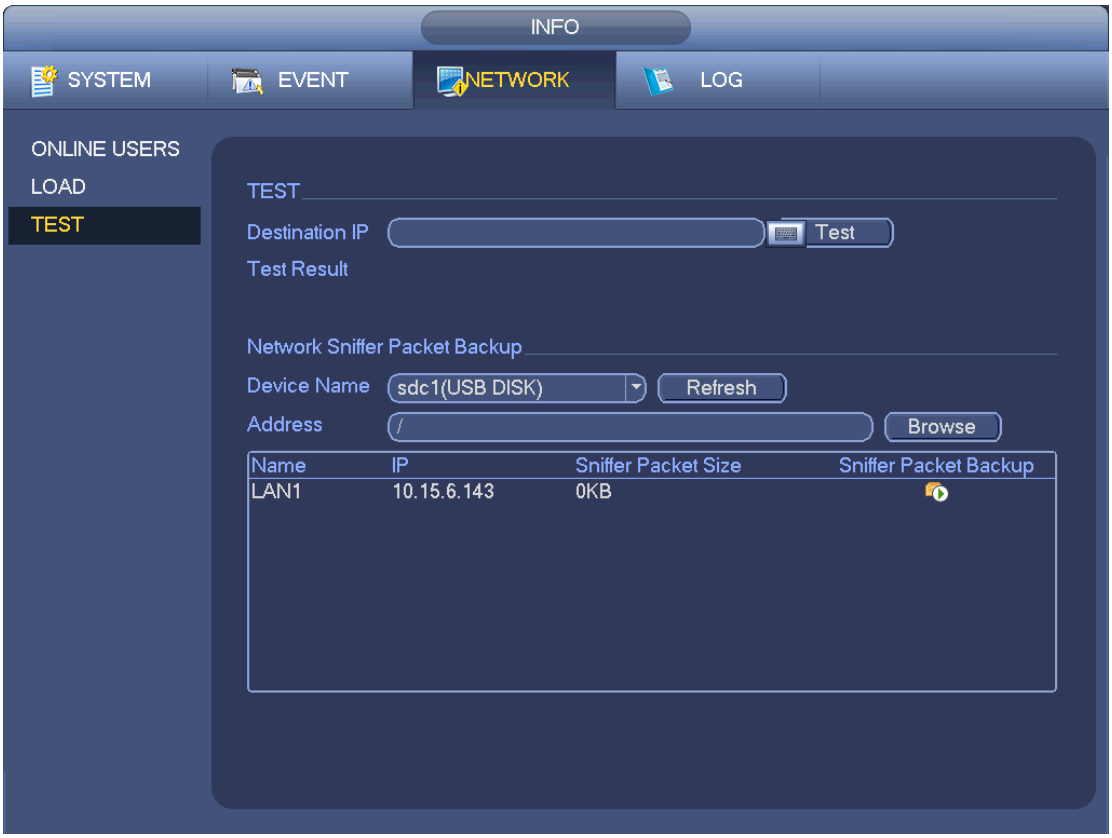

Figure 3-109

3.11.2.2 Network Load

From **Main menu->Info-Network->Load**, network load is shown in Figure 3-110. Here you can view the follow statistics of the device network adapter.

Here you can view information of all connected network adapters. The connection status is shown offline if connection is disconnected. Click one network adapter, you can view the flow statistics such as send rate and receive rate at the top panel

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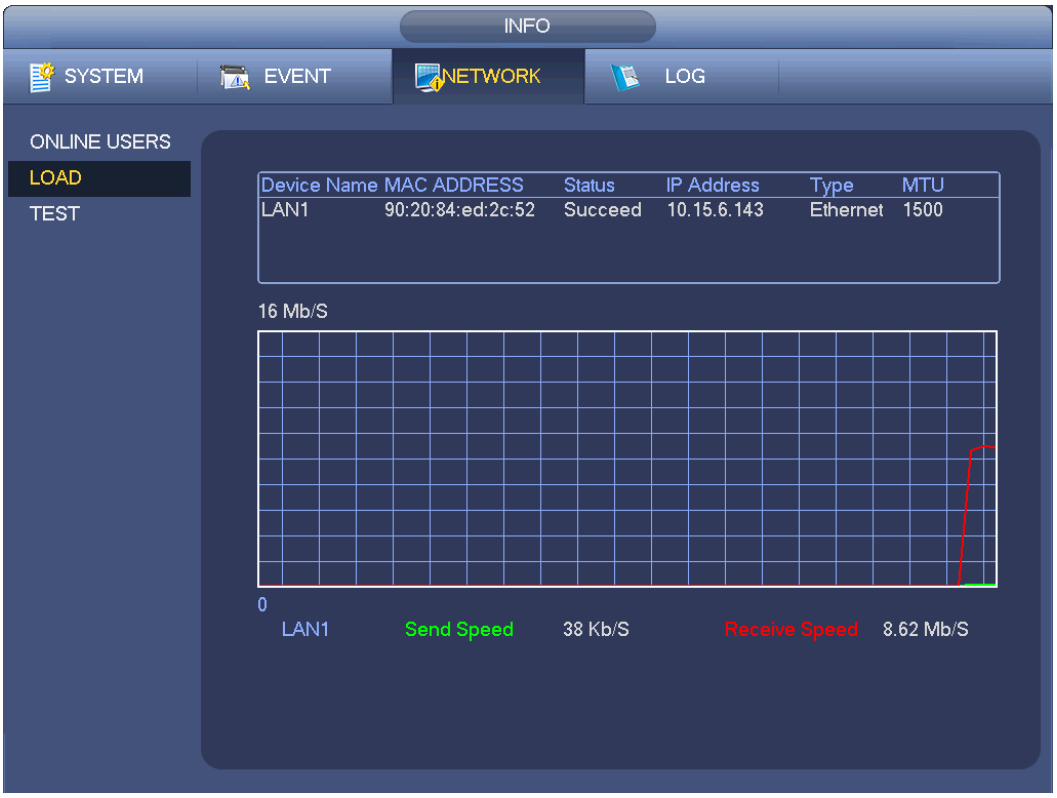

Figure 3-110

3.12 HDD Setup

Here you can view HDD information such as type, status, total capacity, record time , etc.. The operation includes format, resume from error, change HDD property (Read write, Read-only). Here you can also set alarm and HDD storage position.

3.12.1 Format

a) From **Main-menu->Setting->Storage->HDD Manager**, you can go to HDD management interface. See Figure 3-111.

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Figure 3-111

b) Select a HDD and then select format from the dropdown list. Click Execute button.
c) Click OK button to complete the setup. You can see system needs to restart to activate current setup.

3.12.2 HDD Information

Here is to list hard disk type, total space, free space, and status. See Figure 3-112.

○ means current HDD is normal.. - this means there is no HDD.

If disk is damaged, system shows as “?”. Please remove the broken hard disk before you add a new one.

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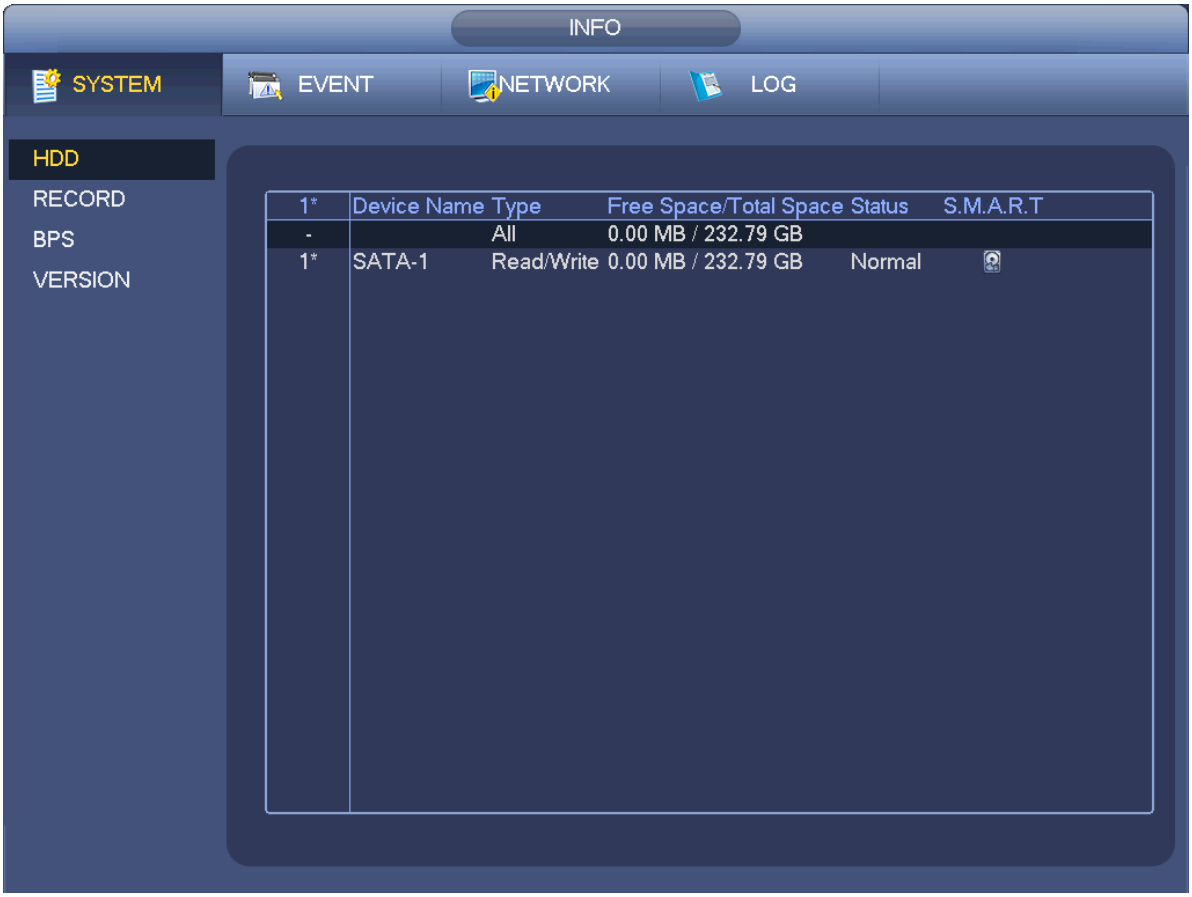

Figure 3-112

In Figure 3-112, click one HDD item, the S.M.A.R.T interface is shown in Figure 3-113.

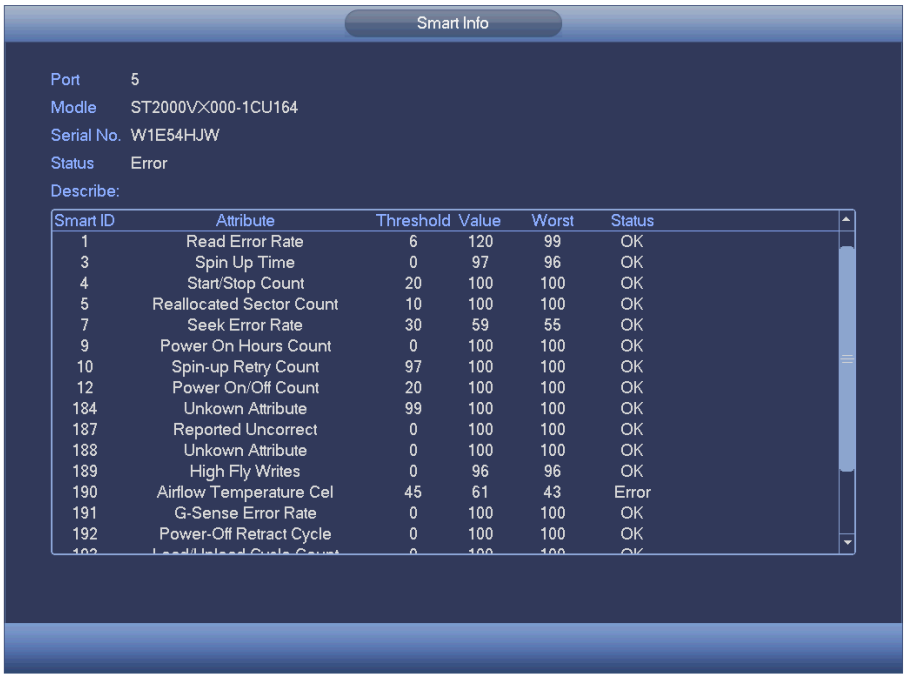
Smart Info
Port 5
Modle ST2000VX000-1CU164
Serial No. W1E54HJW
Status Error
Describe:
Smart ID Attribute Threshold Value Worst Status
1 Read Error Rate 6 120 99 OK
3 Spin Up Time 0 97 96 OK
4 Start/Stop Count 20 100 100 OK
5 Reallocated Sector Count 10 100 100 OK
7 Seek Error Rate 30 59 55 OK
9 Power On Hours Count 0 100 100 OK
10 Spin-up Retry Count 97 100 100 OK
12 Power On/Off Count 20 100 100 OK
184 Unkown Attribute 99 100 100 OK
187 Reported Uncorrect 0 100 100 OK
188 Unkown Attribute 0 100 100 OK
189 High Fly Writes 0 96 96 OK
190 Airflow Temperature Cel 45 61 43 Error
191 G-Sense Error Rate 0 100 100 OK
192 Power-Off Retract Cycle 0 100 100 OK

Figure 3-113

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Parameter	Function
SATA	• 1 here means there is 1 HDD. • For different series product, the max HDD amount may vary, • When HDD is working properly, system is shown O. . “_” means there is no HDD.
SN	You can view the HDD amount the device connected to; * means the second HDD is current working HDD.
Type	The corresponding HDD property.
Total space	The HDD total capacity.
Free space	The HDD free capacity.
Status	HDD can work properly or not.
Bad track	Display there is bad track or not.
Page up	Click it to view previous page.
Page down	Click it to view the next page.
View recording time	Click it to view HDD record information (file start time and end time).
View HDD type and capability	Click it to view HDD property, status , etc.,

3.12.3 Advanced

This is to set HDD group, and HDD group setup for main stream, sub stream and snapshot operation.

IMPORTANT
HDD group and quota mode cannot be valid at the same time. System needs to restart once you change the mode here.

The HDD group mode is shown in Figure 3-114.

- **HDD:** Here you can view the HDD amount the device can support.
- **Group**: It lists the HDD Group number of current hard disk.

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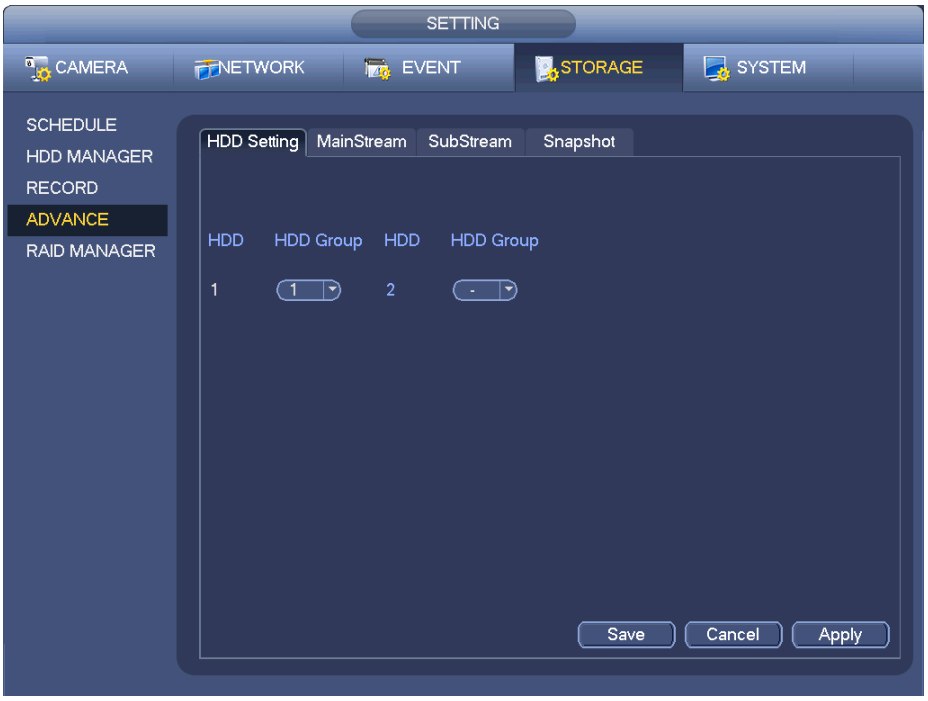

Figure 3-114

Please select the corresponding group from the dropdown list and then click the Apply button.

Click the main stream/sub stream/snapshot button to set corresponding HDD group information. See Figure 3-115 through Figure 3-117.

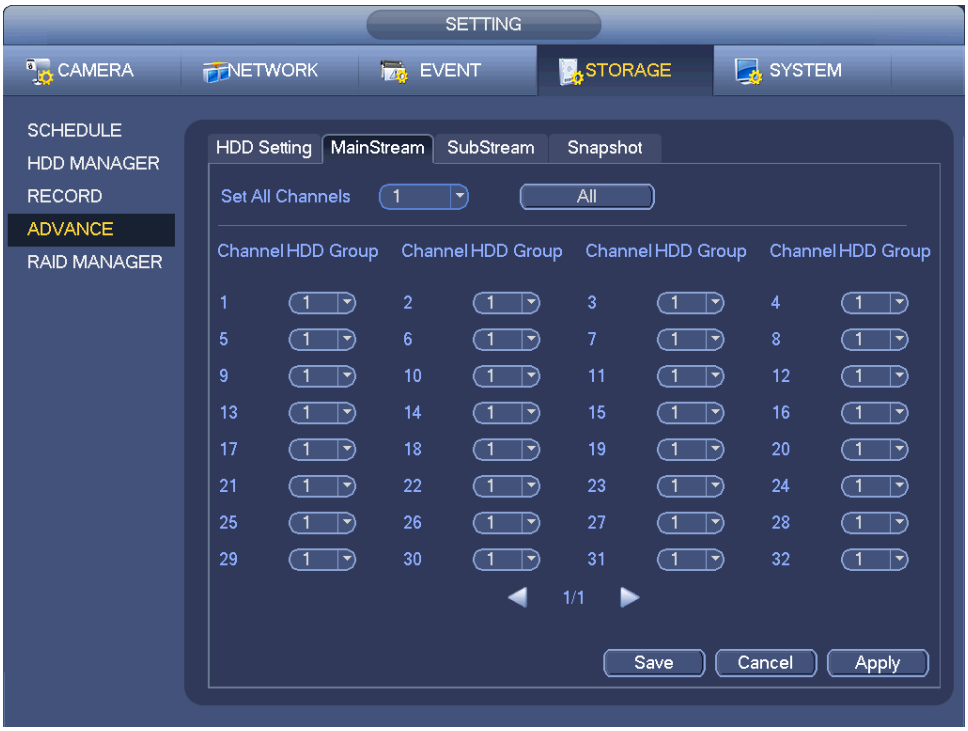

Figure 3-115

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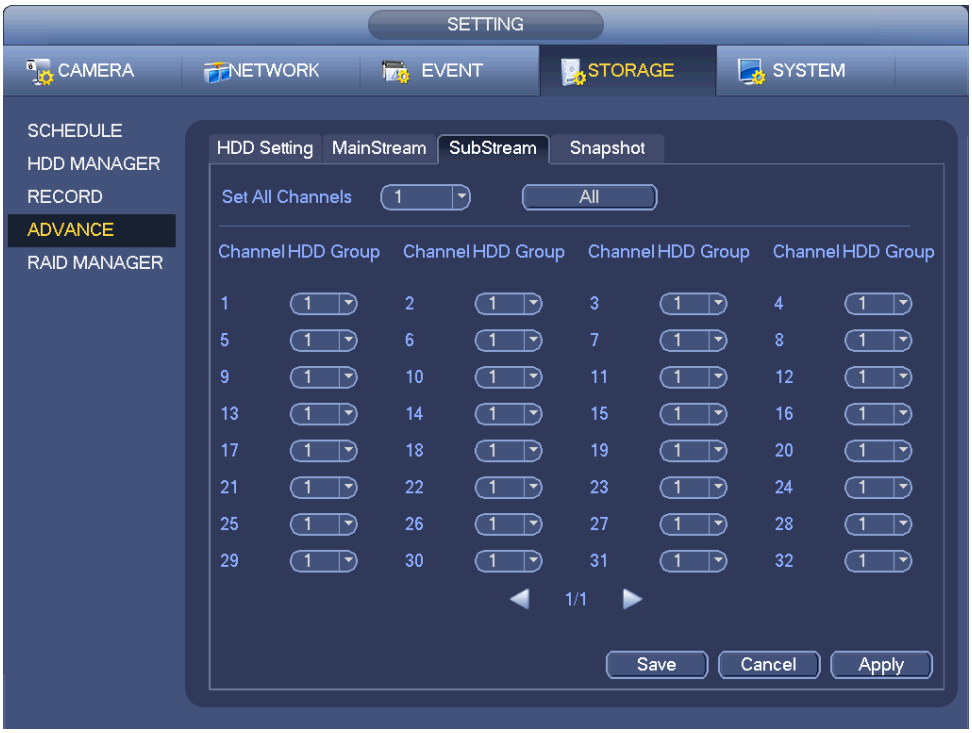

Figure 3-116

Figure 3-117

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3.12.4 RAID Manager

Important:
Please make sure your purchased product support the RAID function, otherwise you cannot see the following interface.

This is for you to manage RAID HDD. It can display the RAID name, type, free space, total space, status , etc. Here you can add/delete RAID HDD.

Click Add button to select RAID type and then select HDDs, click OK button to add. See Figure 3-118

Click Hot spare disks tab name, you can add the hot spare HDD. See Figure 3-119. Select a hot spare device and then click Delete button. Click Apply button to delete.

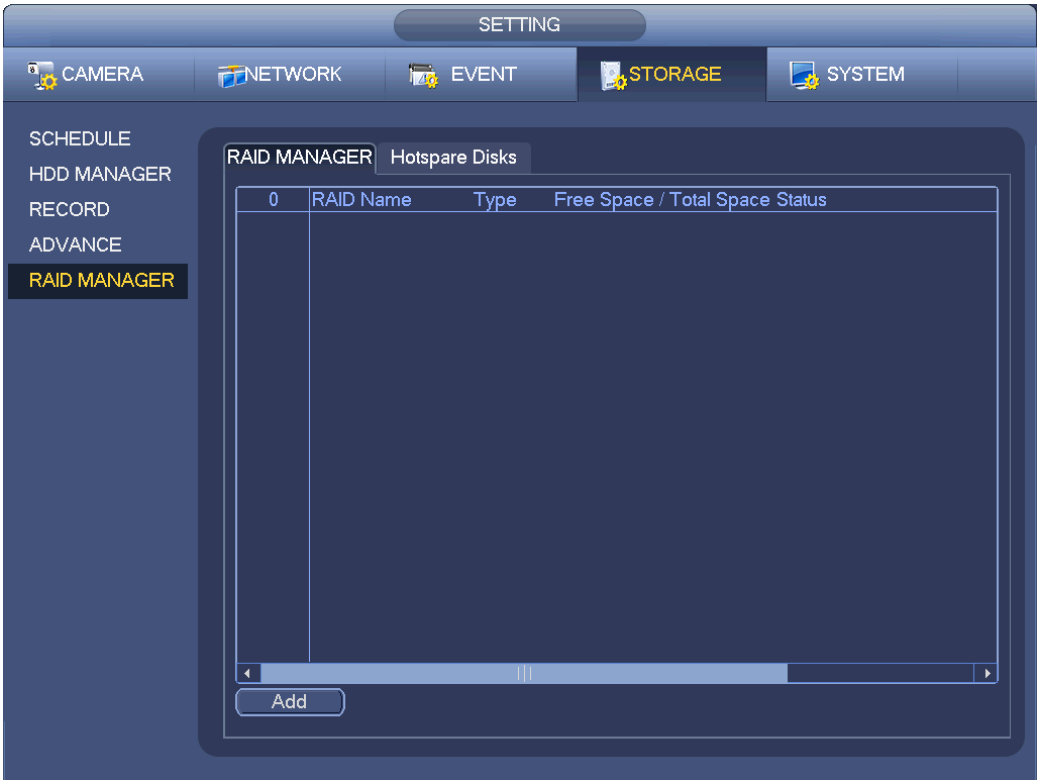

Figure 3-118

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Figure 3-119

3.13 Basic Setups

Set NVR basic setup, device setup and other setups.

3.13.1 Device Setup

From **Main menu->Setting->System->General**, you can go to the general interface. See Figure 3-121.

- **Pack duration**: This is for you to specify record duration. The value ranges from 0 to 120 minutes. Default value is 60 minutes.
- **Device ID**: Please input a corresponding device name here.
- **Device No**: When you are using one remote control (not included in the accessory bag) to control several NVRs, you can give a name to each NVR for your management.
- **Language**: System supports various languages: Chinese (simplified), Chinese (Traditional), English, Italian, Japanese, French, Spanish (All languages listed here are optional. Slight difference may be found in various series.)
- **Video standard**: There are two formats: NTSC and PAL.
- **HDD full**: This is for you to select working mode when hard disk is full. There are two options: stop recording or rewrite. If current working HDD is overwritten or the current HDD is full while the next HDD is no empty, then system stops recording, If the current HDD is full and then next HDD is not empty, then system overwrites the previous files.
- **Pack duration**: This is for you to specify record duration. The value ranges from 1 to 120 minutes. Default value is 60 minutes.

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- **Realtime play**: This is to set playback time you can view in the preview interface. The value ranges from 5 to 60 minutes.
- **Auto logout**: This is for you to set auto logout interval once login user remains inactive for a specified time. Value ranges from 0 to 60 minutes.
- **Navigation bar**: Check the box here, system displays the navigation bar on the interface.
- **IPC Time Sync**: You can input an interval here to synchronize the NVR time and IPC time.
- **Startup wizard**: Once you check the box here, system will go to the startup wizard directly when the system restarts the next time. Otherwise, it will go to the login interface.
- **Mouse property**: You can set the double click speed via dragging the slide bard. You can Click Default button to restore default setup.

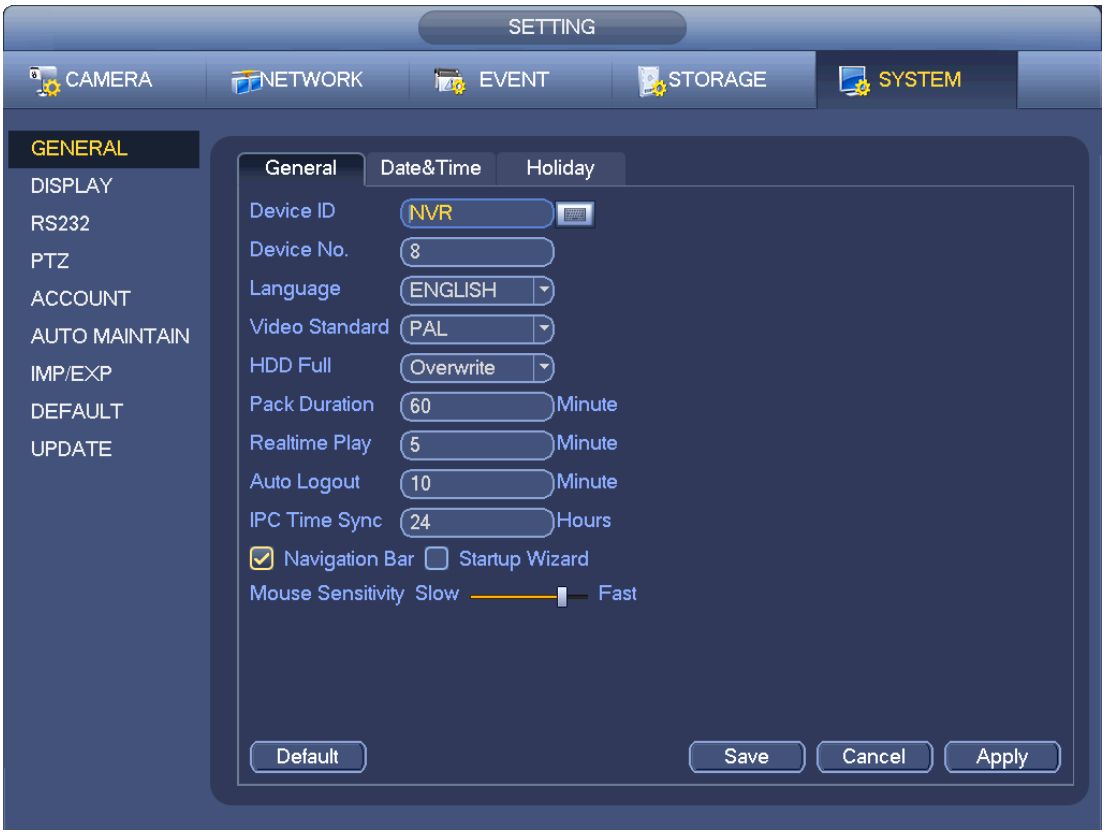

Figure 3-120

3.13.2 Data and Time

From **Main menu->Setting->System->General**, you can go to the general interface. See Figure 3-121.

- **System time**: This is for you to set system time
- **Date format**: There are three types: YYYYY-MM-DD: MM-DD-YYYYY or DD-MM-YYYY.
- **Date separator**: There are three denotations to separate date: dot, beeline and solidus.
- **DST**: Here you can set the DST time and date by week or by date. Please enable DST function and then select setup mode. Please input start time and end time and click Save button.
- **Time format**: There are two types: 24-hour mode or 12-hour mode.
- **NTP:** This is to set NTP server, port and interval.

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Note:
Since system time is very important, do not modify time casually unless there is a must!
Before your time modification, please stop record operation first!

After completing all the setups please click save button, system goes back to the previous menu.

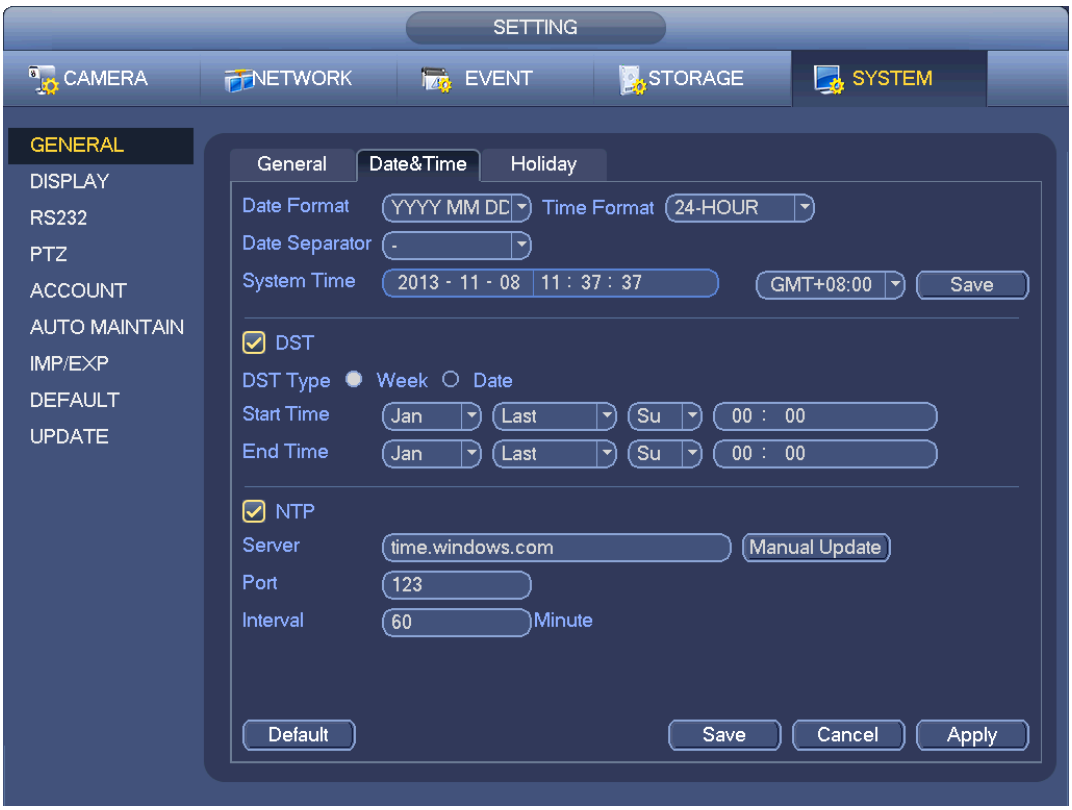

Figure 3-121

3.13.3 Holiday

Holiday setup interface is shown in Figure 3-122. Click Add new holiday button, you can input new holiday information. See Figure 3-123. Here you can set the holiday name, repeat mode and start/end time.

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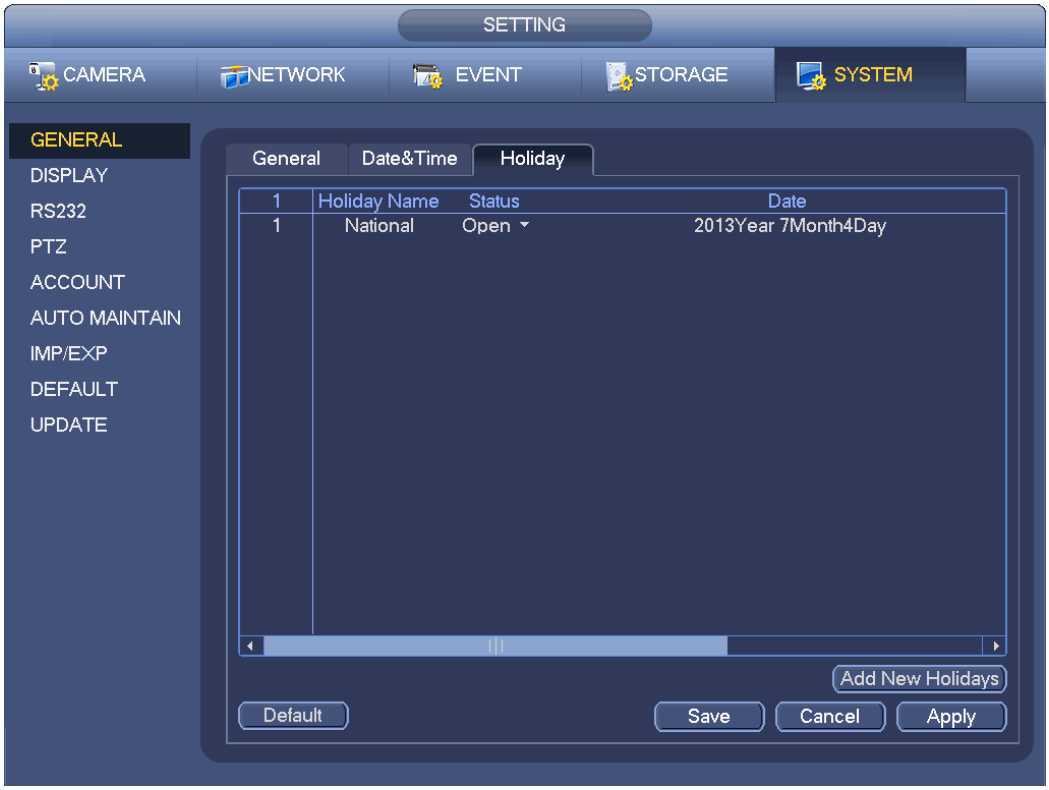

Figure 3-122

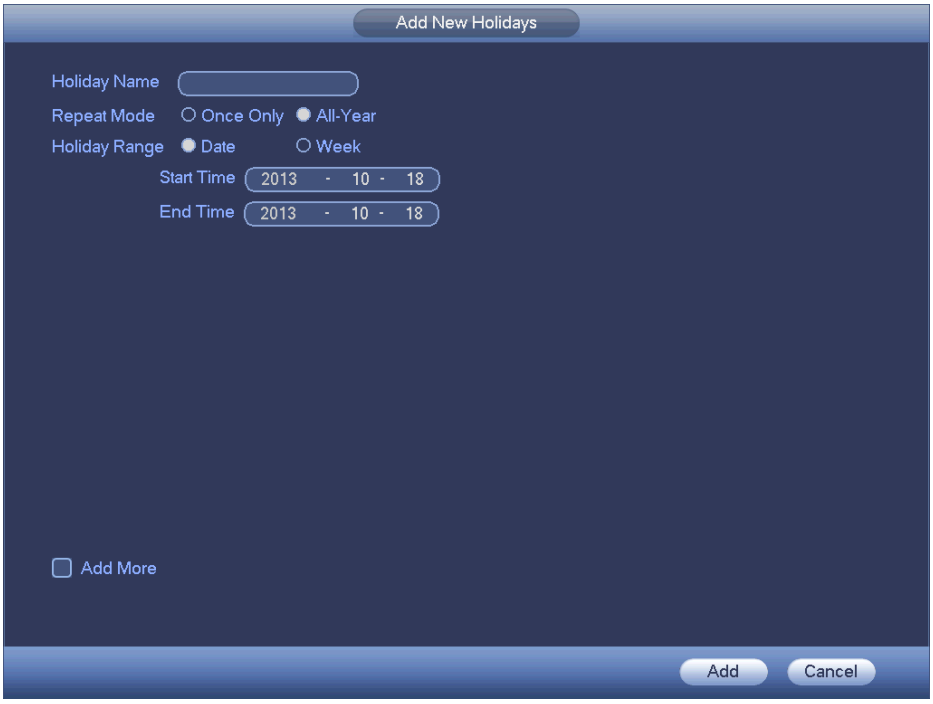

Figure 3-123

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3.14 Device Maintenance and Manager

3.14.1 System Info

3.14.1.1 Version

From **Main menu->Info->System->version**, you can go to version interface.
This is for you to view some version information. See Figure 3-124. **Please note the following figure for reference only.**

- Channel
- Alarm in
- Alarm out
- System version
- Build Date
- Web
- Serial number

Figure 3-124

3.14.1.2 BPS

This is for you to view current video bit rate (kb/s) and resolution. See Figure 3-125.

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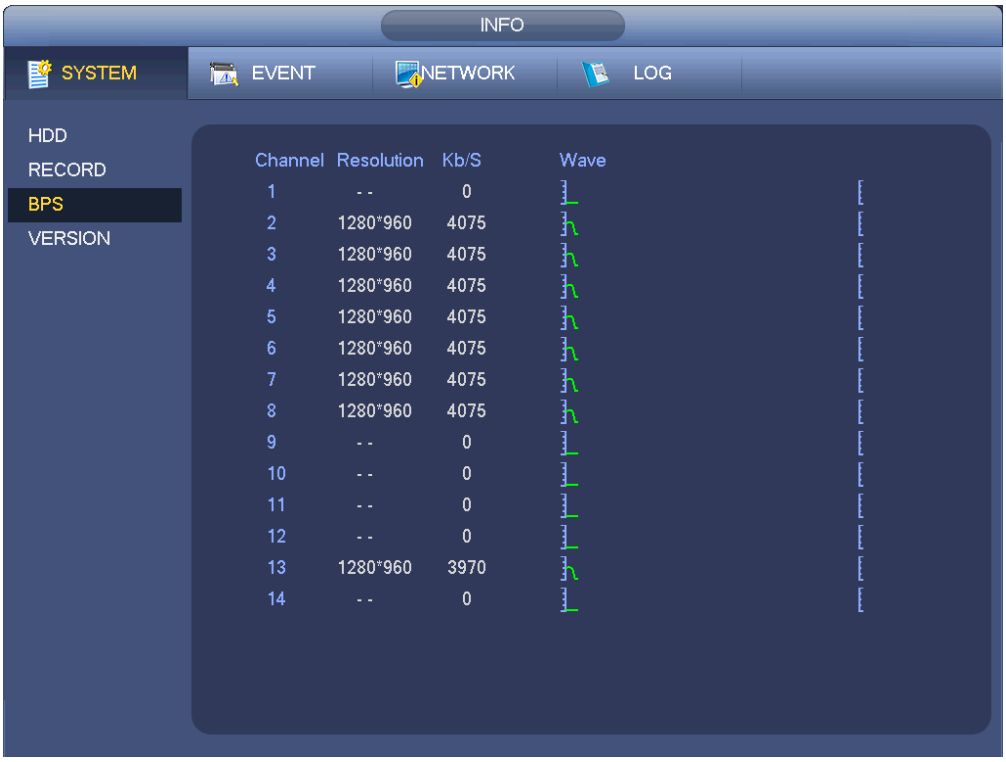

Figure 3-125

3.14.1.3 Online User

This is for you manage online users connected to your NVR. See Figure 3-126.

You can click button to disconnect or block a user if you have the proper system rights to do so. The system searches for any any newly added or deleted user in each five seconds and refresh the list automatically.

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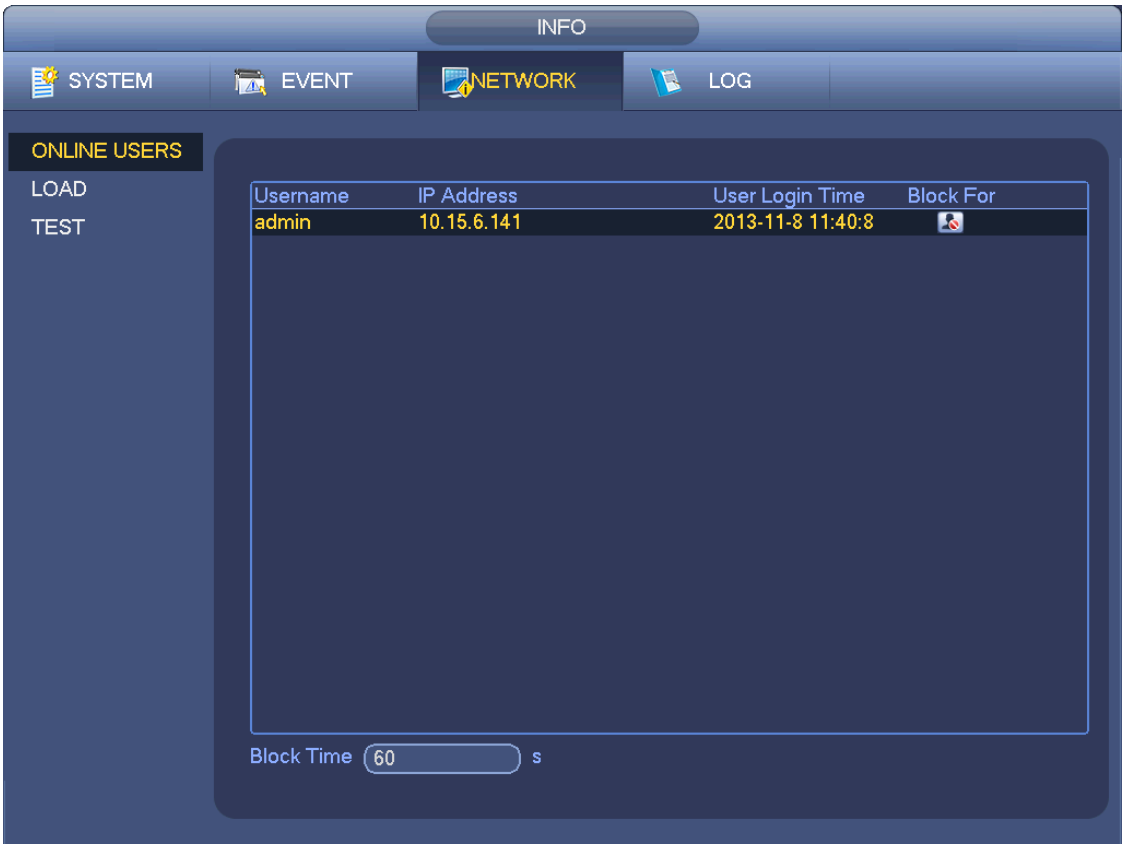

Figure 3-126

3.14.1.4 Remote Device Information

From **Main menu->info-Event**, here you can view the channel status of the remote device, connection log , etc.. See Figure 3-127.

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Figure 3-127

3.14.1.5 Remote

3.14.1.5.1 Device Status

This is where you can view the IPC status of the corresponding channel such as motion detect, video loss, tampering, alarm, etc.. See Figure 3-128.

- **IPC status**: : Front-end does not support. : Front-end supports. : There is alarm event from current front-end.
- **Connection status**: : Connection succeeded. : Connection failed.
- **Refresh**: Click it to get latest front-end channel status.

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Figure 3-128

3.14.1.5.2 Firmware

This is to view channel, IP address, manufacturer, type, system version, SN, video input, audio input, external alarm, etc. See Figure 3-129.

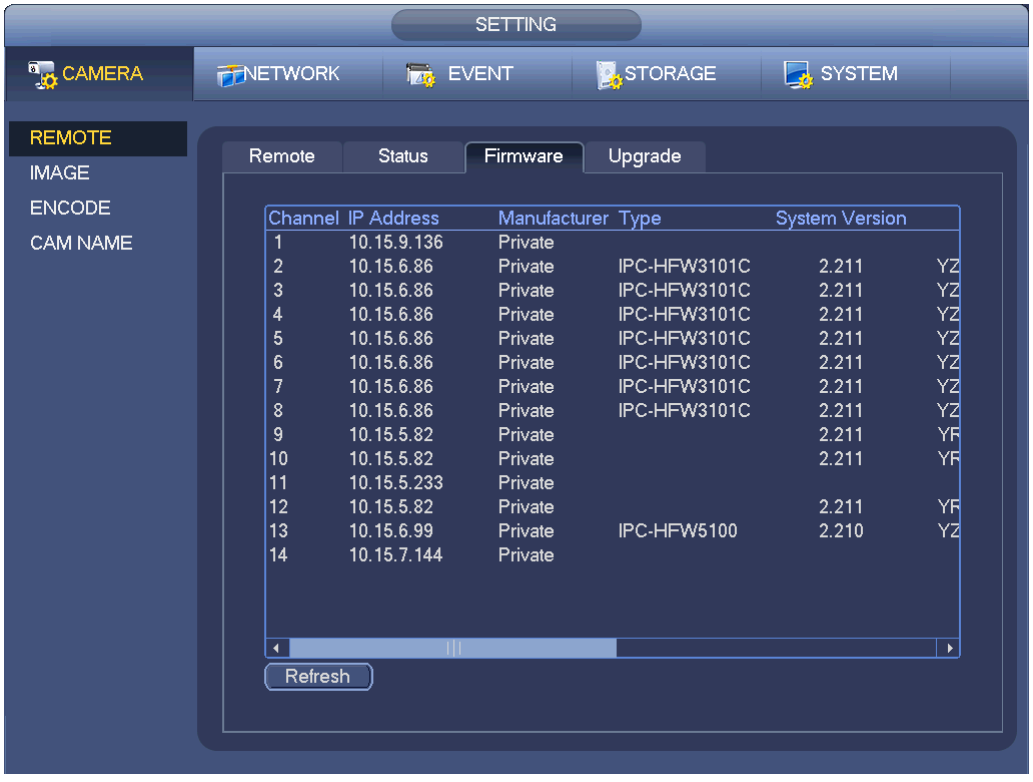

Figure 3-129

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3.14.2 Log

From **Main menu->Info->Log**, you can go to the following interface. See Figure 3-130.

- **Start time/end time**: Pleased select start time and end time, then click search button. You can view the log files in a list. System max displays 100 logs in one page. It can max save 1024 log files. Please use page up/down button on the interface or the front panel to view more.

Tip:
Double click a log item to view its detailed information. See Figure 3-131.

Click PgUp/PgDn to view more logs.

INFO
SYSTEM
EVENT
NETWORK
LOG
LOG
Start Time 2013 - 11 - 07 00 : 00 : 00
End Time 2013 - 11 - 08 00 : 00 : 00
Types All
Search
19 Time Event Play Details
6 2013-11-07 18:01:01 Channel12 User logged in.
7 2013-11-07 18:01:01 Channel 4 User logged in.
8 2013-11-07 18:01:01 Channel 5 User logged in.
9 2013-11-07 18:01:01 Channel 6 User logged in.
10 2013-11-07 18:01:01 Channel 7 User logged in.
11 2013-11-07 18:01:01 Channel 8 User logged in.
12 2013-11-07 18:01:20 Channel 9 User logged in.
13 2013-11-07 18:01:20 Channel13 User logged in.
14 2013-11-07 18:01:20 Channel 2 User logged in.
15 2013-11-07 18:01:20 Channel 3 User logged in.
16 2013-11-07 20:13:01 User logged in.<10.15.6.122>
17 2013-11-07 20:13:01 User logged in.<10.15.6.122>
18 2013-11-07 20:14:01 User logged out.<admin>
19 2013-11-07 20:14:01 User logged out.<admin>
PgUp
PgDn
1/1(Current Page/Total Page)
Go To
1
Page(s)
Backup
Clear

Figure 3-130

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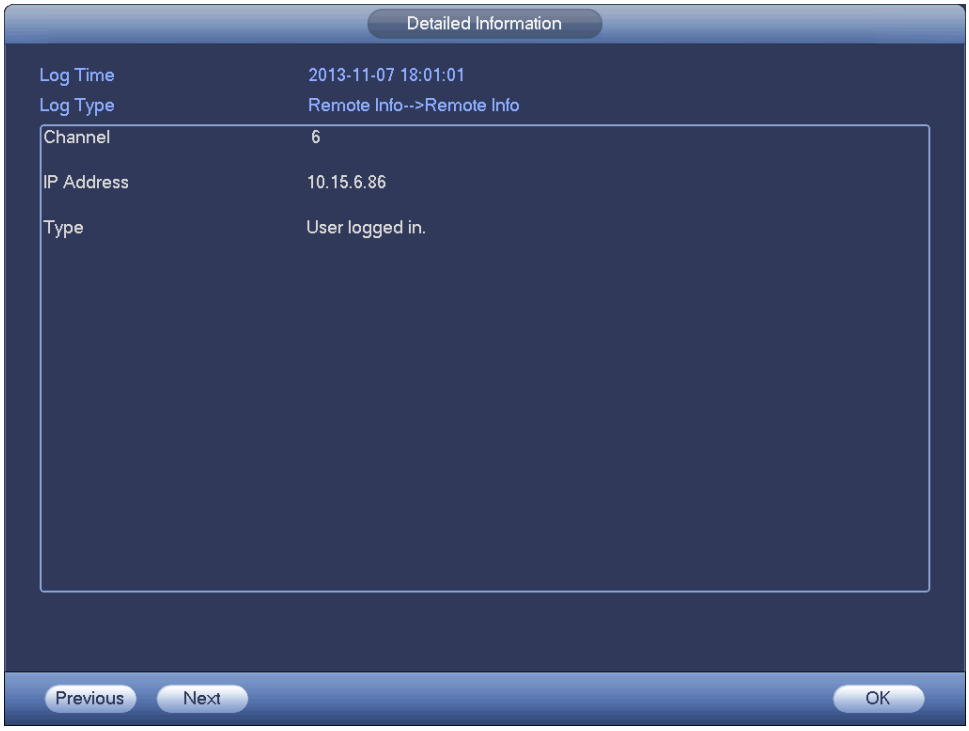

Figure 3-131

3.14.3 Account

This is for you to implement the account management. See Figure 3-132 and Figure 3-133. Here you can:

- Add new user
- Modify user
- Add group
- Modify group
- Modify password.

For account management please note:

- For the user account name and the user group, the string max length is 6-byte. The backspace in front of or at the back of the string is invalid. There can be backspace in the middle. The string includes the valid character, letter, number, underline, subtraction sign, and dot.
- The default user amount is 64 and the default group amount is 20. System account adopts two-level management: group and user. No limit to group or user amount.
- For group or user management, there are two levels: admin and user.
- The user name and group name can consist of eight bytes. One name can only be used once. There are four default users: admin/888888/666666 and hidden user “default”. Except user 6666, other users have administrator right.
- Hidden user “default” is for system interior use only and cannot be deleted. When there is no login user, hidden user “default” automatically login. You can set the some rights such as monitor for this user so that you can view some channel view without login.
- One user should belong to one group. User rights cannot exceed group rights.
- About reusable function: this function allows multiple users use the same account to login.

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After all the setups are complete please click save button, system goes back to the previous menu.

Figure 3-132

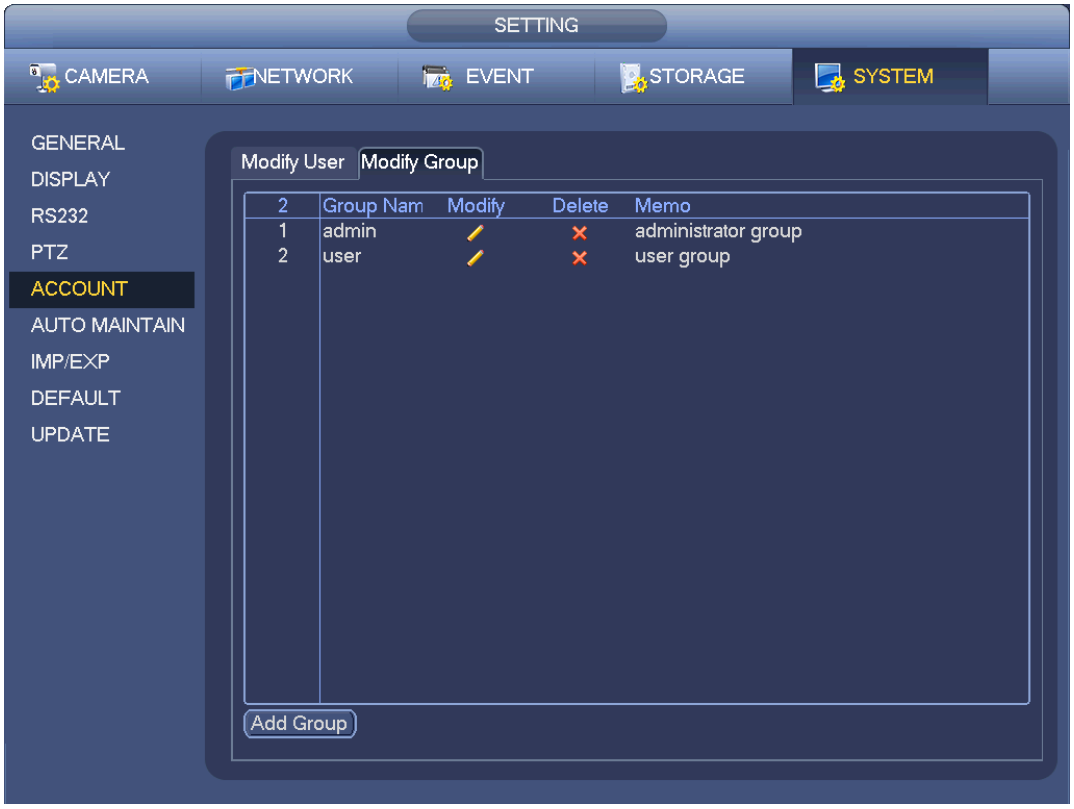

Figure 3-133

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3.14.3.1 Add/Modify Group

Click the add group button, the interface is shown below. See Figure 3-134.

Here you can input group name and then input some memo information if necessary.

There are many different functions on the device that rights can be assigned to groups to allow them to modify/operate, such as control panel, shut down, real-time monitor, playback, record, record file backup, PTZ, user account, system information view, alarm input/output setup, system setup, log view, clear log, upgrade system, control device , etc.

The modify group interface is similar to the Figure 3-134.

Figure 3-134

3.14.3.2 Add/Modify User

Click add user button, the interface is shown in Figure 3-135.

Please input the user name, password, and select the group it belongs to from the dropdown list. Then you can check the corresponding rights for current user.

For convenient user management, usually we recommend the general user right is lower than the admin account.

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The modify user interface is similar to Figure 3-135.

Figure 3-135

3.14.4 Update

From **Main menu->Setting->Info->Update**, you can go to the following interface. See Figure 3-136.

1. Insert USB device that contains the upgrade file.
2. Click Start button and then select the .bin file.
3. You can see the corresponding dialogue box after the update process is complete.

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Figure 3-136

3.14.5 Default

You can restore factory default setup to fix some problems when the device is running slowly. Configuration error occurred.

From **Main menu->Setting->System->Default**, you can go to the default interface. See Figure 3-137.

Click default icon, system pops up a dialogue box. You can highlight to restore factory default setup.

- All
- Camera
- Network
- Event
- Storage
- System

Please highlight icon to select the corresponding function. After all the setups please click OK button, system goes back to the previous menu.

WARNING!
AFTER YOU HAVE USED THE DEFAULT FUNCTION, SOME YOUR CUSTOMISED SETUP MAY BE LOST FOREVER! PLEASE THINK TWICE BEFORE YOU BEGIN THIS OPERATION!

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Figure 3-137

3.14.6 RS232

From **Main menu->Setting->System->RS232**, RS232 interface is shown below. There are five items. See Figure 3-138.

- **Function:** There are various devices for you to select. Console is for you to use the COM or mini-end software to upgrade or debug the program. The control keyboard is for you to control the device via the special keyboard. Transparent COM (adapter) is to connect to the PC to transfer data directly. Protocol COM is for card overlay function. Network keyboard is for you to use the special keyboard to control the device. PTZ matrix is to connect to the peripheral matrix control.
- **Baud rate:** You can select proper baud rate.
- **Data bit**: You can select proper data bit. The value ranges from 5 to 8.
- **Stop bit:** There are three values: 1/1.5/2.
- **Parity:** there are five choices: none/odd/even/space mark.

System default setup is:

- **Function:** Console
- **Baud rate**:115200
- **Data bit:** 8
- **Stop bit:** 1
- **Parity:** None

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After completing all the setups please click save button, system goes back to the previous menu.

Figure 3-138

3.14.7 Auto Maintain

Here you can set the auto-reboot time and auto-delete old files. You can set the system to delete the files for the specified days. See Figure 3-139.

You can select proper setup from dropdown list.

After all the setups please click save button, system goes back to the previous menu.

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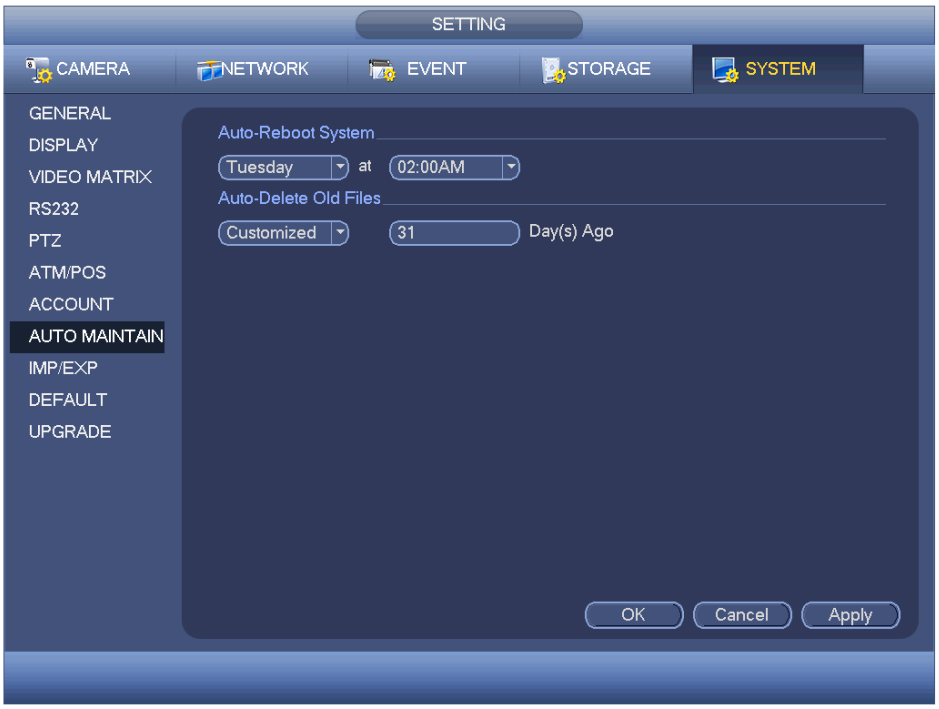

Figure 3-139

3.14.8 Logout /Shutdown/Restart

From **Main menu->Operation->Shutdown**, you can see an interface shown in Figure 3-140.

- Shutdown: System shuts down and turns off power.
- Logout: Log out menu. You need to input password when you login the next time.
- Restart: reboot device.

If you shut down the device, there is a process bar for your reference, system waits for 3 seconds and then shut down (You cannot cancel).

Please note, sometimes you need to input the proper password to shut down the device.

Figure 3-140

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4 Quick Configuration Tool

4.1 Overview

The ‘Quick configuration’ tool can search current IP address and modify IP address. At the same time, you can use it to upgrade the device. Please note: the tool only applies to the IP addresses in the same segment.

4.2 Operation

Double click the “ConfigTools.exe” icon; you can see an interface is shown as in Figure 5-1.
In the device list interface, you can view the device IP address, port number, subnet mask, default gateway, MAC address, etc.

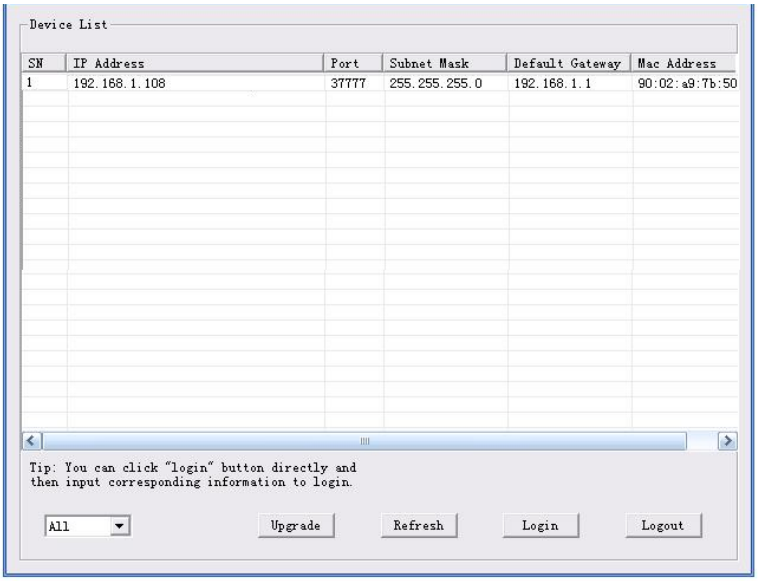

Figure 5-1

Select one IP address and then right click mouse, you will see an interface shown in Figure 5-2.

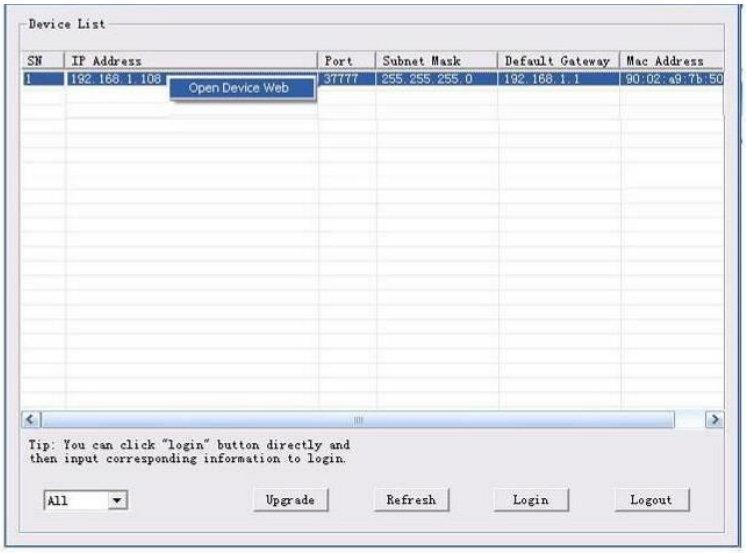

Figure 5-2

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Select the ‘Open Device Web’ item; you can go to the corresponding web login interface (see Figure 4-3.

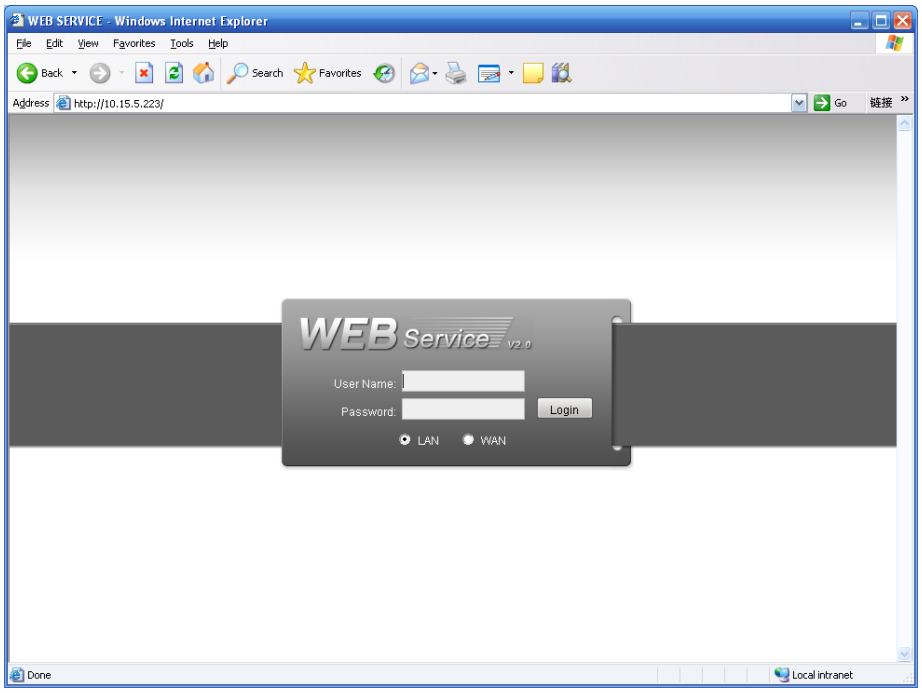

Figure 4-3

- If you want to modify the device IP address without logging in to the device web interface, you can go to the configuration tool main interface to set.

- In the configuration tool search interface (Figure 5-1), please select a device IP address and then double click it to open the login interface. Or you can select an IP address and then click the Login button to go to the login interface (see Figure 4-4).

- In Figure 4-4, you can view device IP address, user name, password and port. Please modify the corresponding information to login.

- Please note the port information here shall be identical to the port value you set in TCP port in Web Network interface. Otherwise, you cannot login the device.

- If you are using device background upgrade port 3800 to login, other setups are all invalid.

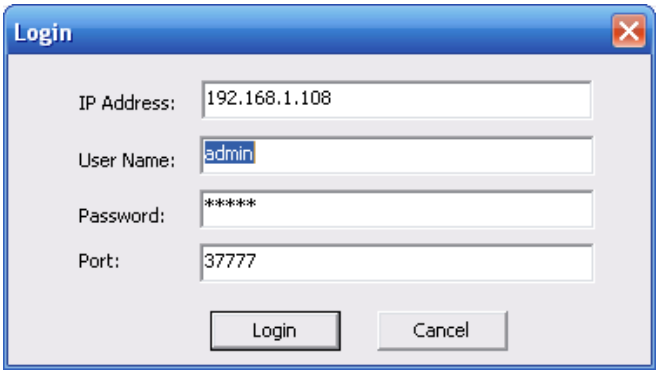

Figure 4-4

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After you have logged in, the configuration tool main interface is shown as below (see Figure 4-5).

Please refer to the *Quick Configuration Tool User's Manual* included in the resources CD for detail information.

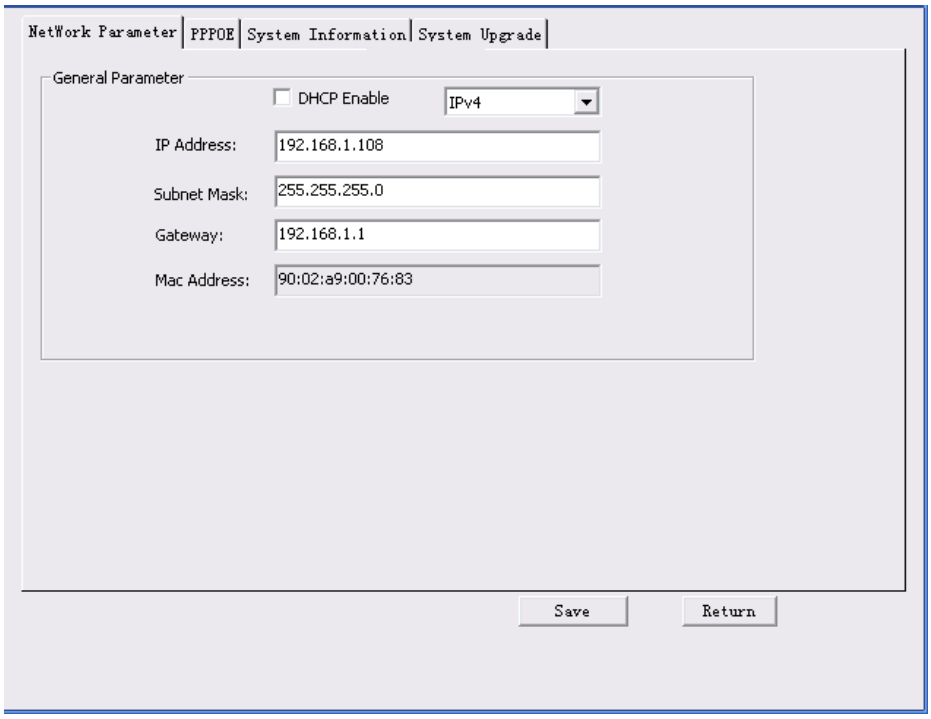

Figure 4-5

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5 FAQ

1. Device cannot boot up properly.

These are the following possibilities:

- Input power is not correct.
- Power connection is not correct.
- Power switch button is damaged.
- Program upgrade is wrong.
- HDD malfunction or something wrong with HDD ribbon.
- Front panel error.
- Main board is damaged.

2. Device often automatically shuts down or stops running.

These are the following possibilities:

- Input voltage is not stable or it is too low.
- HDD malfunction or something is wrong with the internal disk.
- Button power is not enough.
- Front video signal is not stable.
- Working environment is too harsh, too much dust.
- Hardware malfunction.

3. System cannot detect hard disk.

These are the following possibilities:

- HDD is broken.
- HDD internal disk is damaged.
- HDD cable connection is loose.
- Main board SATA port is broken.

4. There is no video output whether it is one-channel, multiple-channel or all-channel output.

These are the following possibilities:

- Program is not compatible. Please upgrade to the latest version.
- Brightness is set to the ‘0’ value. Please restore factory default setup.
- There is no video input signal or it is too weak.
- Check privacy mask setup or your screen saver.
- Device hardware malfunctions.

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5. Real-time video color is distorted.

These are the following possibilities:

- When using the BNC output, the NTSC and PAL setup may not be correct. The real-time video will become black and white.
- Device and monitor resistance is not compatible.
- Video transmission is too long or degrading is too huge.
- Device color or brightness setup is not correct.

6. I cannot search local records.

These are the following possibilities:

- HDD internal disk is damaged.
- HDD is broken.
- Upgraded program is not compatible.
- The recorded file has been overwritten.
- Record function has been disabled.

7. Video is distorted when searching local records.

These are the following possibilities:

- Video quality setup is too low.
- Program read error, bit data is too small. If there is mosaic in the full screen, please restart the device to solve this problem.
- HDD internal disk error.
- HDD malfunction.
- Device hardware malfunctions.

8. There is no audio when monitoring.

These are the following possibilities:

- It is not a power picker.
- It does not have powered acoustics.
- Audio cable is damaged.
- Device hardware malfunctions.

9. There is audio when monitoring but there is no audio when system playback.

These are the following possibilities:

- Setup is not correct. Please enable audio function.
- Corresponding channel has no video input. Playback is not continuous when the screen is blue.

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10. Time display is not correct.

These are the following possibilities:

- Setup is not correct.
- Battery contact is not correct or voltage is too low.
- Crystal is broken.

11. Device cannot control PTZ.

These are the following possibilities:

- Front panel PTZ error.
- PTZ decoder setup, connection or installations are not correct.
- Cable connection is not correct.
- PTZ setup is not correct.
- PTZ decoder and device protocols are not compatible.
- PTZ decoder and device addresses are not compatible.
- When there are several decoders, please add 120 Ohm between the PTZ decoder A/B cables furthest end to delete the reverberation or impedance matching. Otherwise the PTZ control will not be stable.
- The distance is too far.

12. Motion detection function does not work.

These are the following possibilities:

- Period setup is not correct.
- Motion detection zone setup is not correct.
- Sensitivity is too low.
- For some versions, there is hardware limit.

1. I cannot log in client-end or web.

These are the following possibilities:

- Please make sure you have at least Windows XP installed on to your system. The system is compatible with Vista and Windows 7 also, but only 32-bit versions.
- ActiveX control has been disabled.
- No DirectX 8.1 or higher. Please upgrade display card driver.
- Network connection error.
- Network setup error.
- Password or user name is invalid.
- Client-end is not compatible with device program.

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14. It shows a mosaic or no video when previewed, either locally or remotely.

These are the following possibilities:

- Network fluency is not good.
- Client-end resources are limited.
- There is multiple-cast group setup in device. This mode can result in a mosaic being produced. Usually we do not recommend this mode.
- There is a privacy mask or channel protection setup.
- Current user has no right to monitor video footage.
- Local device video output quality is substandard.

15. Network connection is not stable.

These are the following possibilities:

- Network is not stable.
- IP address conflict.
- MAC address conflict.
- PC or device network card is not good.

16. Burn error /USB2.0 back error.

These are the following possibilities:

- Burner and device are using the same data cable.
- System uses too much CPU resources. Please stop recording first and then begin backup.
- Data amount exceeds backup device capacity. It may result in burner error.
- Backup device is not compatible.
- Backup device is damaged.

17. Keyboard cannot control device.

These are the following possibilities:

- Device serial port setup is not correct
- Address is not correct
- When there are several switchers, power supply is not enough.
- Transmission distance is too far.

18. Alarm signal cannot be disarmed.

There are following possibilities:

- Alarm setup is not correct.
- Alarm output has been open manually.
- Input device error or connection is not correct.
- Some program versions may have this problem. Please upgrade your system.

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19. Alarm function is not working.

These are the following possibilities:

- Alarm setup is not correct.
- Alarm cable connection is not correct.
- Alarm input signal is not correct.
- There are two loops connected to one alarm device.

20. Remote control does not work.

These are the following possibilities:

- Remote control address is not correct.
- Distance is too far or control angle is too small.
- Remote control battery power is low.
- Remote control is damaged or device front panel is damaged.

21. Record storage period is not long enough.

These are the following possibilities:

- Camera quality is too low. Lens is dirty. Camera is installed against the light. Camera aperture setup is not correct.
- HDD capacity is not enough.
- HDD is damaged.

22. Cannot playback the downloaded file.

These are the following possibilities:

- There is no media player.
- No DirectX 8.1 or higher graphic acceleration software has been installed.
- There is no DivX503Bundle.exe control when you play the file transformed to AVI via media player.
- No DivX503Bundle.exe or ffdshow-2004 1012 .exe in Windows XP OS.

23. I forgot local menu operation password or network password

Please contact your local service engineer for help. They will be able to guide you to solving this problem.

24. There is no video. The screen is in black.

These are the following possibilities:

- IPC IP address is not correct.
- IPC port number is not correct.
- IPC account (user name/password) is not correct.

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25. The displayed video is not complete.

Please check the current resolution setup. If the current setup is 1920x1080, then you need to set the monitor resolution as 1920x1080.

26. There is no HDMI output.

These are the following possibilities:

- Displayer is not in HDMI mode.
- HDMI cable connection is not correct.

27. The video is not fluent when I view in multiple-channel mode from the client-end.

These are the following possibilities:

- The network bandwidth is not sufficient. The multiple-channel monitor operation needs at least to be 100M or higher.
- Your PC resources are not sufficient. For 16-ch remote monitor operation, the PC shall have the following recommended specification setup: Quad Core processor, 2G or higher memory, independent displayer, graphics card memory 256MB or higher.

Daily Maintenance

- Please use a brush to clean the board, socket connector and the chassis regularly.
- The device shall be soundly earthed in case there is any audio/video disturbance. Keep the device away from the static or induced voltage.
- Please unplug the power cable when you remove the audio/video signal cable, RS232 or RS485 cable.
- Always shut down the device properly. Please press the power button in the front panel for at least three seconds to shut down the device. Otherwise it may result in HDD malfunction.
- Please make sure the device is away from the direct sunlight or other heating sources.
- Please keep a decent level of ventilation around the device.
- Please check and maintain the device regularly.

Note:

- **This manual is for reference only. Slight differences may be found when using the user interface.**
- **All the designs and software here are subject to change without prior written notice.**
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